

VOLFENZON, L. G.

"The resistance of tissues of some hibernating and non-hibernating rodents to cooling and supercooling."

UNESCO - International Symposium on the Role of Cell Reactions in Adaptations of Metazoa to Environmental Temperature.

Leningrad, USSR, 31 May - 5 June 1963

VOL'FENZON, L.G.; STUDITSKIY, A.N., nauchnyy redaktor

[General histology] Obshchaya gistologiia. Nauch. red. A.N. Studitskiy.
Moskva, 1955. 27 plates.
(HISTOLOGY--ATLASSES)

(MLRA 9:7)

VOL'YENZON, L.G.

Paranecrotic effect of local anesthetics on cellular elements of
various tissues. Zhur. ob. biol. 15 no.3:220-224 My-Je '54.
(MLRA 7:6)

(ANESTHETICS, LOCAL, effects,
*on tissue of various organs in vitro)

VOL'FENZON, L.G.

Changes in the size of nuclei in mesothelial and mast cells due
to the effect of novocaine. TSitologija 1 no.6:641-648 N-D '59.
(MIRA 13:4)

1. Laboratoriya kletochnykh adaptatsiy Instituta tsitologii AN
SSSR, Leningrad.
(CELL NUCLEI) (NOVOCAIN)

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001860430003-6

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CIA-RDP86-00513R001860430003-6"

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001860430003-6

KIKNADZE, G.G., inzh.; VOL'FENZON, M.M., inzh.

Pedestrian tunnel at Stantsiya Didube. Transp. stroi. 15 no.5:20-21
My '65. (MIRA 18:7)

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001860430003-6"

GOLUBEV, N.V.; VOL'FENZIK, M.M.

Development of the power plants of Soviet-built seagoing
transport ships, Sudostroenie no. 11-31-34 N 65
(MIRA 1981)

VOL'FENZON, M.N., inzhener.

Diesel electric plant of the loose bulk load freighter, "Dneproges"
and the refrigerator vessel "Aktiubinsk;" Sudostroenie 23 no.4:11-18
Ap '57. (MLRA 10:5)
(Dneproges (ship)) (Aktiubinsk (ship))

VOL'FENZON, M. N., inzh.

Steam turbine plant on the tanker "Peking." Sudostroenie 26
no.8:23-30 Ag '60. (MIRA 13:10)
(Steam turbines) (Marine engineering)

AVAKYAN, A.B.; VOL'FSHAG, D.B.

Review of power engineering in Switzerland. Energochuz. za rukh.
no.1:1-2 Ja-F '57. (NIIK 12:10)
(Switzerland--Power engineering)

YOM 1971, 10, 10, 2.

Power--Electric power production in Spain. Energokhoz. za ruk. N. A. L-7
Jl-Ag. '59. (Dir. 10:11)
(Spain--Electric power production)

VOL'FEN'ON, L.G.

Effect of glycerol on the survival time of ciliated epithelium
of the rat trachea during cooling and supercooling. (Biologiya
5 no. 3:326-328 My-Je '63.)
(SACN 1716)

1. Laboratoriya kosmicheskoy biologii Instituta letatel'noj tekhniki
SSSR, leningrad.

L 3673C-65 EPF(c), EPF(n)-2/ETR, EWP(j), STA('s')-2/TRA('h')/EWP(j)/ETL(1)/ETV(m)

ACCESSION NR.: AF500-893

Scanned by Kali/2000/000-0042/0055

AUTHOR: Vol'f-Epshteyn, A. B.; Karavayev, G. N.; Krichko, A. N.; Medzhibovskiy, B. A.

TITLE: An organic heat-transfer agent for nuclear reactors based on the by-products of cumene production

SOURCE: Moscow, Institut atomnoy energii. Issledovaniya po primeneniyu organicheskikh teplonositeley-zamenitelye v reaktorakh beskirkovskikh reaktorov (Research on the use of organic heat carriers-replacement agents and moderators in zero reactors). Moscow, Atomizdat, 1984, 31-3.

TOPIC TAGS: organic reactor coolant, thermal reactor, radiation polymerization,
polymer, infrared spectra, radioactive tracer, gamma radiation, polymerization,
polyalkylbenzene resin, epichlorohydrin, radioactive tracer

ABSTRACT: The authors investigated the possibility of obtaining an organic heat transfer agent whose radiation-induced crosslinks would be removable by thermal or chemical methods. From the results it was found that polymer fragments of about 10⁴ daltons could be removed by heating at 200°C for 1 hr.

Card 172

L 36730-65

ACCESSION NR: AT5007898

the resin are derivatives of biphenyl and biphenylalkanes. The boiling point of the resin was 310 - 365°C for fractions obtained at 200 - 300°C. Hydrogenation was carried out in the presence of an Al₂O₃-Mg catalyst under a hydrogen pressure of 10 - 80 kg/cm² at 150 - 200°C. The authors give no figures for the rate measured within ±2%, ±10%, and ±15% respectively. The decomposition rate of the heat-transfer agent under the same conditions of temperature and temperature was examined in a temperature range of 200 - 300°C. Each test lasted from 20 - 24 hrs. The authors give no data on the decomposition rate of the heat-transfer agent. The authors do not give any data on the thermal stability of the polymer. The viscosity of the polymer is given as 100 dl/g. The diffusion coefficient of oxygen in the polymer is given as 1.2 x 10⁻¹⁰ cm²/sec. The activity of this coolant is no different from that of the other fluids investigated. Orig. art. has: 8 figures, 1 table and 1 formula.

ASSOCIATION: Institut atomnoy energii, Moscow (Institute of Atomic Energy)

SUBMITTED: 01Aug64

ENCL: 00

SUB CODE: NP, OC

NO REF Sov: 000

OTHER: 000

Card 2/2

16.3500

34761
S/140/62/000/001/002/011
C111/C444

AUTHOR: Vol'fersdorf, L.

TITLE: On the singular elliptic Neumann problem for the Tricomi equation

Dedicated to the memory of Professor F. J. Frankl'

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika,
no. 1, 1962, 14-19

TEXT: Considered is the problem N

$$\Psi_{xx} + \Psi_{yy} + \frac{1}{3y} \Psi_y = 0 \quad (2)$$

$$\Psi_n(t) = f(t) \text{ on } L \quad (3a)$$

$$\Psi_\eta(x) = v(x) \text{ on } \overline{AB} \quad (3b)$$

where A and B are the points -1 and +1 of the x-axis, (2) is obtained out of

$$\eta\Psi_{xx} + \Psi_{\eta\eta} = 0 \quad (1)$$

Card 1/4

On the singular elliptic Neumann ...

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by the substitution $y = \frac{2}{3} \eta^{3/2}$, L connects the points A and B in the upper half plane xy, L does not touch the x-axis in A and B, n indicates the inner normal, the inclination angle θ of the tangent of L satisfies the Hölder condition and in the neighborhood of A and B the following conditions

$$|f(t)| \leq \text{const } v^{-\alpha}, \quad \alpha < \frac{4}{3} \quad (t = u + iv \in L) \quad (4a)$$

$$|\psi(x)| \leq \text{const } |x \pm 1|^{-\beta}, \quad \beta < 1 \quad (4b)$$

are satisfied. One puts $\Psi = \Psi^I + \Psi^{II}$, and the problem N is reduced to the following two problems

$$\Psi_\eta^I = \psi(x) \text{ on } AB \quad (\text{problem } N^I), \quad (7a)$$

$$\Psi_\eta^{II} = 0 \text{ on } \overline{AB}, \quad \Psi_n^{II} = f(t) - \Psi_n^I(t) = g(t) \text{ on } L \quad (\text{problem } N^{II}), \quad (7b)$$

Card 2/4

On the singular elliptic Neumann ...

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C111/C444

The solution of the original problem N is then, except for an additive constant, given by the sum of

$$\Psi^I(z) = \alpha_3 \int_{-1}^1 v(\xi) |z - \xi|^{-1/3} d\xi \quad (10)$$

where

$$\alpha_3 = - \frac{\Gamma(1/6)}{2^{2/3} 3^{1/3} \pi^{1/2} \Gamma(2/3)}$$

and of

$$\Psi^{II}(z) = E \int_L v^{1/3} \mu(t) |z - t|^{-1/3} F\left(\frac{1}{6}, \frac{1}{6}, \frac{1}{3}, z\right) ds \quad (11)$$

where $E = -2^{-2/3} \frac{\Gamma^2(1/6)}{\pi \Gamma(1/3)}$, and where the density $\mu(t)$ inside of L

Card 3/4

On the singular elliptic Neumann . . . S/140/62/000/001/002/011
is real and continuous. For the existence of the solution it is C111/C444
necessary and sufficient that the condition

$$\int_L \eta^{1/2} f(t) ds + \int_{-1}^1 \gamma(\xi) d\xi = 0 \quad (18)$$

✓

be satisfied.

The author mentions Frankl'.

There are 2 Soviet-bloc and 5 non-Soviet-bloc references and one figure.
ASSOCIATION: Universitet g. Galle/Zaale, GDR (University of the town

Halle/Saale, DDR)

SUBMITTED: April 10, 1961

Card 4/4

KLFERTS, A. A.

State Inst. Microbiol. & Epidemiol. of South East
Seratov '34 '35

Epizoolgy of tularemia. I. Role of ectoparasites. Vest. Microbiol.,
Epidemiol. & parasitol. 13:103-16. '34 c S. A. Kolpakova & A. A. Flegontova
Skin test in tularemia according to Pirquet. Vest. Microbiol., Epidemiol.
& Parasitol. 13:277-8. '34
Tularemia. A review. 119 ref. Vest. Microbiol., Epidemiol. & Parasitol.
14: 183-97. '35

VOL'FERTS, Galina Aleksandrovna

Anii-Gene Characteristics of Fungous Filtrates

Dissertation for candidate of a Medical Science degree. Chair of Cutaneous Diseases (head, Prof. A.F. Ukhin) Saratov Medical Institute, 1943

Volferts, G.A.

USSR Microbiology. Medical and Veterinary
Microbiology.

F-6

Abs Jour: Referat. Zh.-Biol., No. 9, 1957, 35768

Author : Volferts, G.A.; Shvartsman, S.M.

Title : The Pathogenicity and Virulence of Cultures of
Yeast-like Fungi, Isolated in Mycosis of the
Lower Extremities

Orig Pub: V sb.:Eksperim. i klinich. issledovaniia II, L,
Medgiz, 1956, 133-134

Abstract: Yeast-like fungi, screened from mycosis of the
lower extremities and usually viewed as saprophytes
can under definite conditions be converted into
pathogenic. Suspensions of cells of Mycotoruloides
and Geotrichoides, isolated from people with easy
scaling in the inter-toe fold in the so-called
worn off forms of mycosis of the lower extremities,

Card 1/2

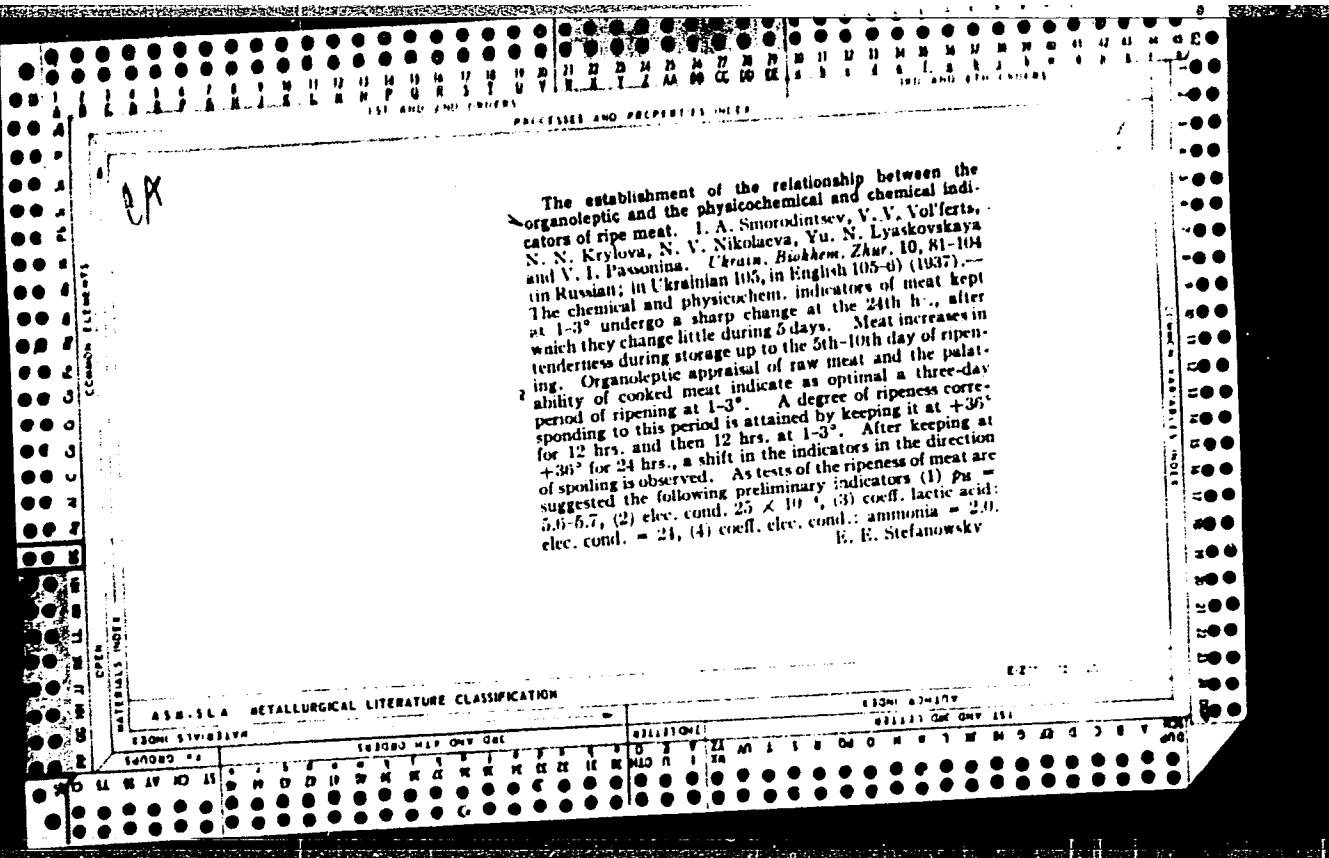
USSR /Microbiology. Medical and Veterinary
Microbiology.

F-6

Abs Jour: Referat. Zh.-Biol., No. 9, 1957, 35768

Were injected into guinea pigs, rabbits and mice. Infection was obtained only in the guinea pigs with an intradermal injection of the culture and according to the method of Pak or Blokh. Four to five passages through the organism of the guinea pigs strengthened the virulence of the cultures -- it caused the death of the animal from sepsis both in intravenous and intraperitoneal injections.

Card 2/2



VOL'FERTS, V. Yu.

VOL'FERTS, V. Yu.: Veterinarysanitation Advice, Fifth revised edition
KORYAZHNOW, V. P.: Moscow, State Agricultural Press
1950, 387 pages with illustrations, 11 rubles, 90 kopeks, Bound, Copies --
25,000. Textbook and teaching aid for higher agricultural educational
institutions.

SO: , U-4724, Sept. 30, 1953, . (Veterinariya,
No. 4, Apr. 1951, pp. 60-61, Moscow.)

ACCESSION NR: APL021613

S/0269/64/000/002/0020/0020

SOURCE: RZh. Astronomiya, Abs. 2.51.162.

AUTHOR: Vol'feyl', L.

TITLE: An automatic instrument for photographing artificial earth satellites

CITED SOURCE: Byul. st. optich. nablyudeniya iskusstv. sputnikov Zemli, spets. vyip., 1962, 51-54

TOPIC TAGS: artificial satellite, artificial earth satellite, photographic artificial satellite observation, artificial satellite observation station, satellite observation camera

TRANSLATION: An instrument for photographic observations of bright satellites has been constructed at the artificial earth satellite optical observation station at Gdansk-Oliwa. The instrument consists of three cameras with objectives having D:F = 1:4.5; F = 13.5 cm. The cameras are attached to a common parallactic mounting with a clock mechanism. There is an obturator controlled by a micromotor in

Card 1/2

ACCESSION NR: ARI021613

front of the objective of each camera. The cameras record the satellite trail on an arc of a trajectory up to 160°. The text is accompanied by a block diagram of the instrument and an electronic circuit which controls the operation of the camera. Operation of the instrument is described. (The article does not give results of testing of the instrument and does not evaluate the possible accuracy of determination of positions and transit times during the photographing of artificial earth satellites. Reviewer's note.) V. Novopashenny.

DATE ACQ: 09Mar64

SUB CODE: AS

ENCL: 00

Card 2/2

APPENDIX B. (Continued.)

22.21. *Urtica dioica* L. (Nettle) (Fig. 22.21)

1990-1991 学年第二学期期中考试高二物理试题

ASSOCIATION: none

BRUNNEN Verlag | www.brunnen-verlag.de | 978-3-7347-3612-2 | 10,99 €

Card 12.1

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10. The following table shows the number of hours worked by each employee in a company.

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APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001860430003-6"

3.1230

39315

S/035/62/000/007/021/083
A001/A101

AUTHOR: Vol'feyl', L.

TITLE: Approximate photographic observations of Earth's artificial satellites at Gdansk-Oliva (Poland)

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 7, 1962, 25, abstract 7A190 ("Byul. st. optich. nablyudeniya iskusstv. sputnikov Zemli", 1960, no. 11, 16 - 20)

TEXT: Photographic observations of Earth's artificial satellites are conducted by means of an astrograph with clock mechanism ($D = 130$ mm; $F = 500$ mm; $1 : 4.5$; visual field $8^\circ \times 11^\circ$) and two cameras ($1 : 4.5$) with Zeiss Ikon-Dominor-Anastigmat and Contessa-Nettar-Anastigmat objectives. In both cases plates 9×12 cm (Agfa-Astroplatten) are used. The method of photographing is conventional: Discontinuities in tracks of Earth's artificial satellites are made by means of a contact device - several short ones, one long and then again several short ones. Discontinuities are recorded on the chronograph. A simplified method is employed for processing: The plate with the satellite track

Card 1/2

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Approximate photographic observations of...

S/035/62/000/007/021/083
A001/A101

is projected, by means of a magnification device, on the corresponding region of the sky map from the A. A. Mikhaylov Stellar atlas, stars are superposed and co-ordinates of individual points of the satellite track are read off. The accuracy of coordinate determination is conditioned by the scale of the sky map.

M. Illenko. *V*

[Abstracter's note: Complete translation]

Card 2/2

VOLFIK, B.

"Up-to-date results and future prospects for the development of the Geodetic and Cartographic Institute in Prague."

P. 30. Ustredni sprava geodesie a kartografie, (Praga, Czechoslovakia)
Vol. 4, no. 2, Feb. 1958

SO: Monthly Index of East European Accesision (SLAI) LC, Vol. 7, No. 5, May 1958.

VOL'FKEVICH, Ya.Ye., inzh.

Increasing the height of the steel towers of a 132 kv. electric line
without interrupting its operation. Energochuz. za rub. no. 4;47
Jl-Ag '60, (MIRA 13:10)
(Ohio--Electric lines--Overhead)

VOL'FKOVICH, M.I., professor; SHUB, M.G., kandidat meditsinskikh nauk

Role of the upper respiratory tract in poliomyelitis diagnosis
[with summary in English]. Vest.oto-rin. 19 no.2:40-43 Mr-Apr '57.

1. Iz kliniki bolezney ukha, gorla nosa Saratovskogo meditsinskogo
instituta.

(RESPIRATORY TRACT, pathol.

changes, diag. value in polio. (Eng))

(POLIOMYELITIS, diag.

role of changes in upper resp. tract (Eng))

VOL'FKOVICH, M.I., professor

Diagnosis and therapy of otogenic abscesses of the brain and of the cerebellum [with summary in English]. Vest.oto-rin. 19 no.3:3-12
My-Je '57. (MIRA 10:10)

1. Iz kliniki bolezney ukha, gorla i nosa Saratovskogo meditsinskogo instituta.

(BRAIN, abscess

otogenic of cerebrum & cerebellum, diag. & ther., review)

(OTITIS MEDIA, compl.

brain abscess, diag. & ther., review)

VOL'KOVICH, M.I., prof. (Saratov)

Results of a discussion on the diagnosis and treatment of patients
with otogenic abscesses of the brain and cerebellum. Vop. otorin.
21 no.6:53-61 N-D '59. (MIRA 13:4)
(BRAIN ABSCESS)
(OTITIS MEDIA, complications)

VOL'FKOVICH, M.I., prof.

Occupational trauma of the larynx. Zhur. ush., nos. i gorl.bol.
19 no.5:73-74 S-0 '59, (MIRA 14:10)

1. Klinika bolezney ukha, gorla i nosa Saratovskogo meditsinskogo
instituta.

(LARYNX—DISEASES)

(AGRICULTURAL WORKERS—DISEASES AND HYGIENE)

VOL'FKOVICH, M.I., prof.; USOL'TSEV, N.N., prof.; TIKHOMIROVA, G.I.,
kand. med. nauk; LIKHACHEV, Andrey Gavrilovich, prof.,
zasl. deyatel' nauki, red.; VOLKOV, V.A., red.; MOLOGIN, V.N.,
red. GUDENINA, T.Ye., tekhn. red.

[Instructions for practical studies in otorhinolaryngology for
medical institutes] Metodicheskie zapiski k prakticheskim za-
natiiam po otorinolaringologii; dlia meditsinskikh institutov.
Moskva, 1960. 73 n. (MIRA 15:3)

1. Moscow. Pervyy meditsinskiy institut.
(OTORHINOLARYNGOLOGY—STUDY AND TEACHING)

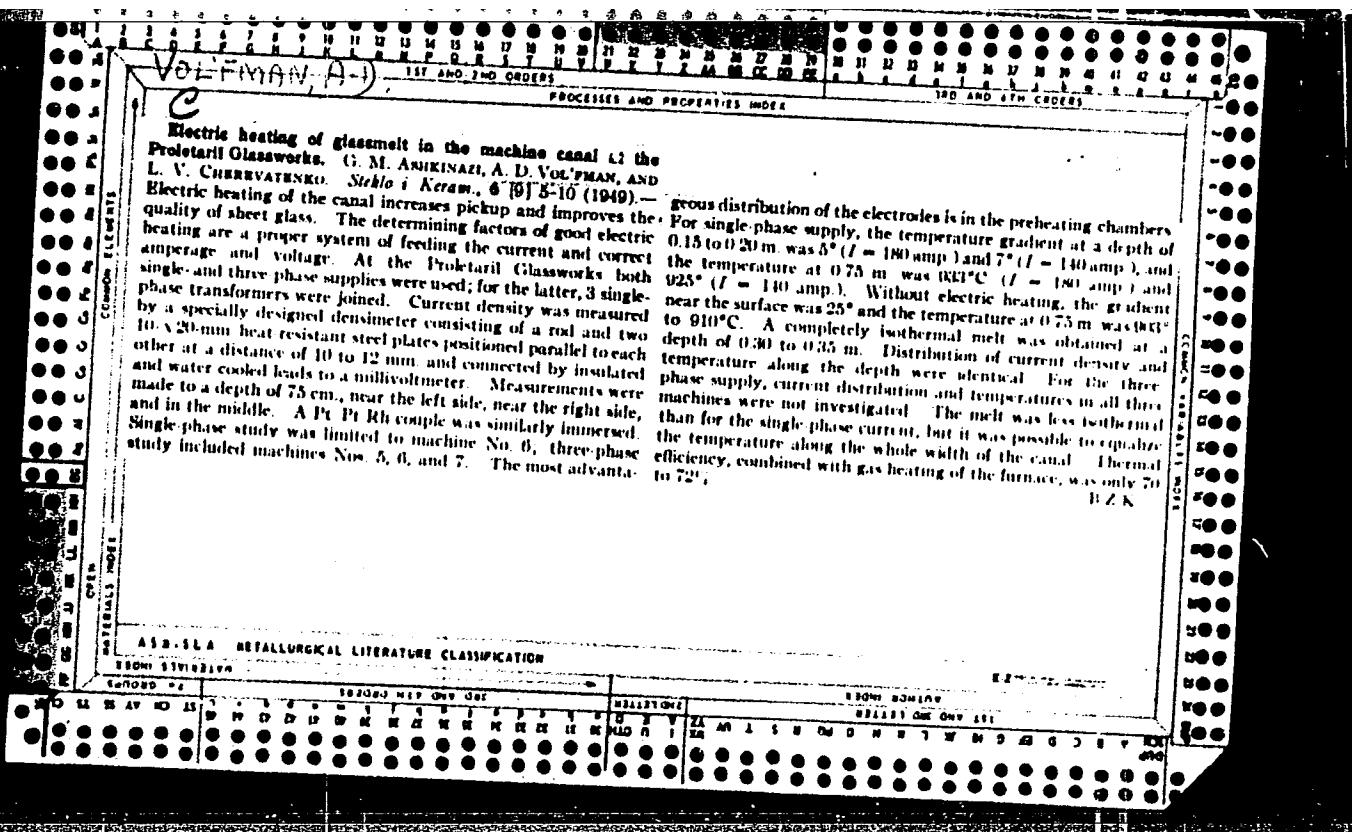
SENKOV, F.V., kand.tekhn.nauk; KONOVALOVA, A.P., inzh.; KONONOVICH, Yu.V.,
inzh.; YELISEYEVA, A.S., tekhnik; POLYAKOV, V.F., tekhnik; GROMOV,
N.K., kand.tekhn.nauk, retsenzent; VOL'FKOVICH, M.Ye., retsenzent;
CHABROV, I.M., red.

[Regulation of the daily allowance of heat supply to apartment
houses and public buildings; scientific report] Rezhimy autochno-
go regulirovaniia otpuska tepla zhilym i obshchestvennym zdaniiam;
nauchnoe soobshchenie. Pushkin, Akad.kommun.khoz.im.K.D.Pamfilova,
1959. 73 p. (MIRA 13:5)

(Heating from central stations)

VOL'FKOVICH, S.I.

In memory of Ivan Platonovich Losev. Zhur. prikl. khim. 37
no.2:447-448 F '64. (MIRA 17:9)



BOBROVSKIY, N.A., prof., red.; VOL'FSOVICH, M.I., prof., red.;
VOL'FSOV, Z.I., prof., red.; LIKHACHEV, A.G., prof., red.;
NEVSKIY, B.N., red.; PREOBRAZHENSKIY, B.S., prof., red.;
SAGALOVICH, B.M., doktor med. nauk, red.; SAKHAROV, P.P.,
prof., red.; UNDRITS, V.F., prof., red. [deceased]

[Transactions of the First All-Russian Congress of
Otorhinolaryngologists] Trudy pervogo Vserossiiskogo s"ezda
otorinolaringologov. Moskva, Medgiz, 1963. 318 p.

(MIRA 17:7)

1. Vserossiyskiy s"ezd otorinolaringologov. 1st. Volgograd,
1962.
2. Deystvitel'nyy chlen AMN SSSR (for Preobrazhenskiy).
3. Chlen-korrespondent AMN SSSR (for Undr'ts).
4. Glavnnyy
otorinolaringolog Ministerstva zdravookhraneniya RSFSR (for
Bobrovskiy).

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001860430003-6

VOL'FKOVICH, M. I., prof.

Dangerous toys. Zdorov'e 8 no.7:27 J1 '62.

(MIRA 15:7)

(TOYS)

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001860430003-6"

VOL'KOVICH, M.I., professor.

Certain problems of training students and staff physicians in
the field of otolaryngology. Vest. oto-rinol? no.4:15-19 Jl-Ag
'55.
(MLRA 8:10)

1. Iz kliniki bolezney ikha, gorla i nosa imeni akad. N.P.
Simanovskogo Saratovskogo gosudarstvennogo meditsinskogo
instituta)
(OTORHINOLARYNGOLOGY, education,
in Russia)

VOL'FKOVICH, M.I., prof. (Saratov)

Pathogenetic therapy in acute (common cold) catarrh of the
upper respiratory tract. Vest. otorin. 23 no.1:3-11 Ja-P '61.

(COLD (PATHOLOGY)) (RESPIRATORY ORGANS—DISEASES)
(MIRA 14:2)

VOL'FKOVICH, M.I., prof. (Saratov)

Some problems in the organization of emergency otorhinolaryngological aid. Vest. otorin. no. 5:4-9 '62. (MIRA 15:9)
(OTORHINOLARYNGOLOGY)
(FIRST AID IN ILLNESS AND INJURY)

BOBROVSKIY, N.A., prof., red.; VOL'FKOVICH, M.I., prof., red.
(Saratov); VOL'FSO, Z.I., prof., red.; NEVSKIY, B.N.,
red.; PREOBRAZHENSKIY, B.S., prof., red.; SAGALOVICH,
B.M., doktor med. nauk, red.; SAKHAROV, P.P., prof.,
red.; UNDRITS, V.F., prof., red. [deceased]

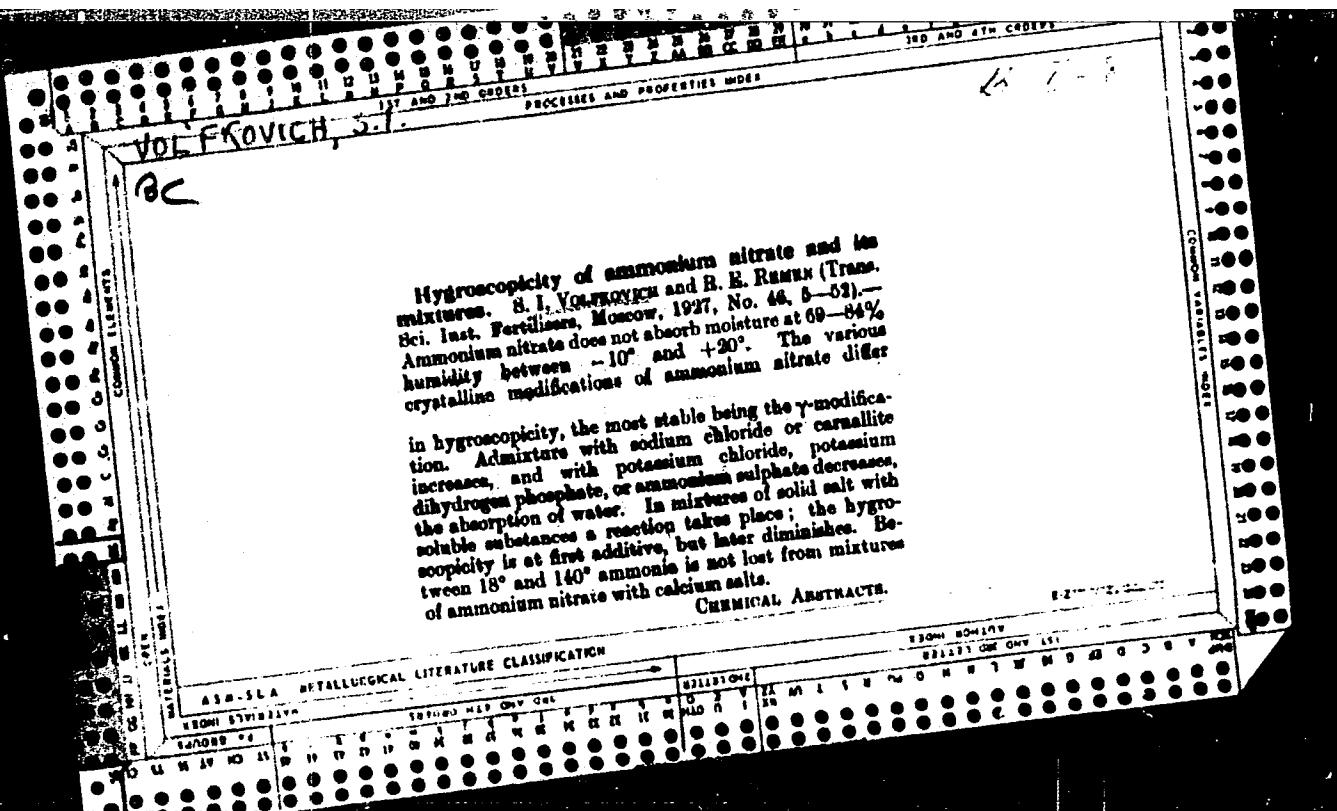
[Transactions of the First All-Russian Congress of
Otorhinolaryngologists] Trudy Vserossiyskogo s"yezda
otorinolaringologov. Moskva, Medgiz, 1963. 518 p.
(MIRA 18:3)

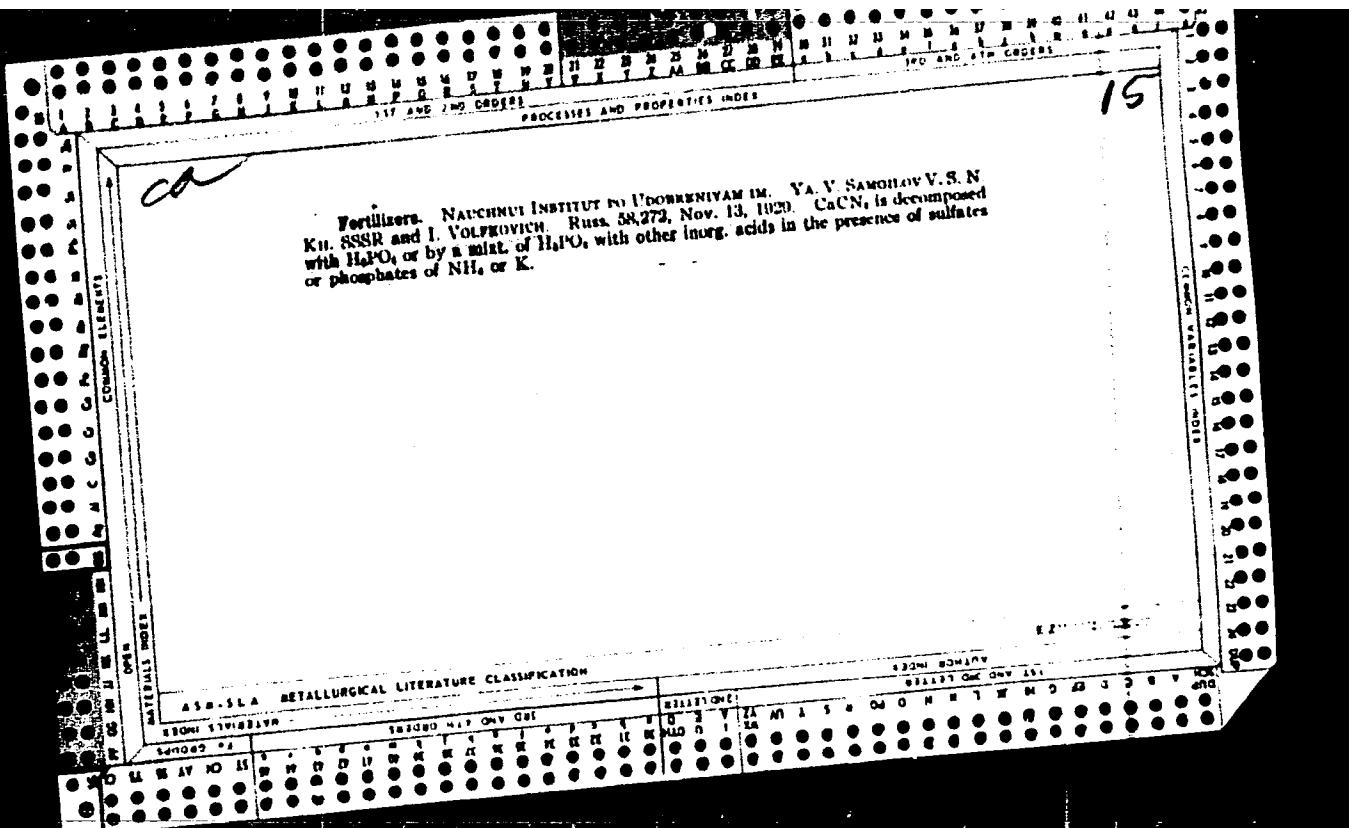
1. Vserossiyskiy s"yezd otorinolaringologov. 1st,
Volgograd, 1962. 2. Deystvitel'nyy chlen AMN SSSR
(for Preobrazhenskiy). 3. Chlen-korrespondent
AMN SSSR (for Undrits).

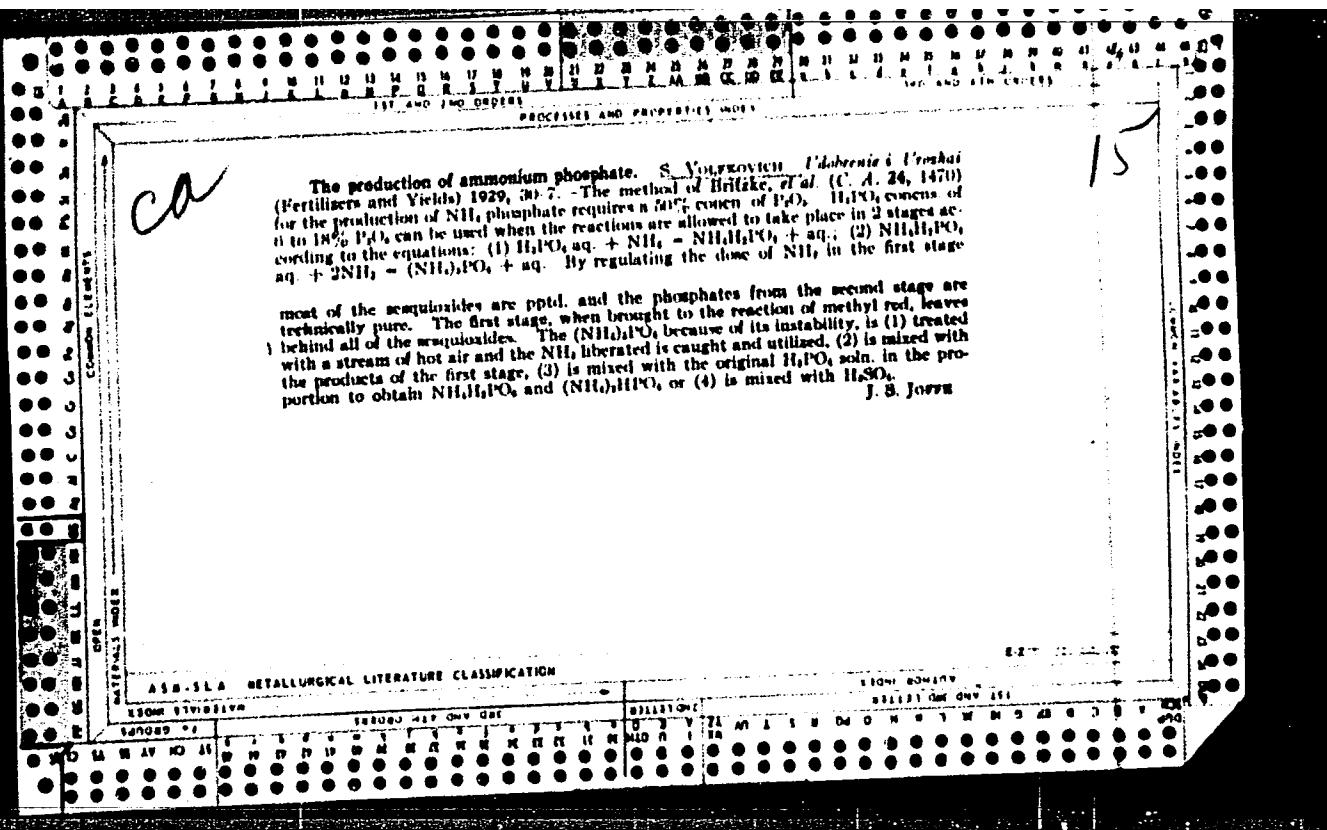
ANTONOV, A.M., prof., red.; VOL'FKOVICH, M.P., prof., red.;
ZAKHAROVA, G.N., dots., red.; IVANOV, N.R., dots., red.;
IOFFE, I.L., prof., red.; FOY, A.M., prof., red.;
SHAMARIN, P.I., prof., red.; SHERISHORINA, S.I., prof., red.

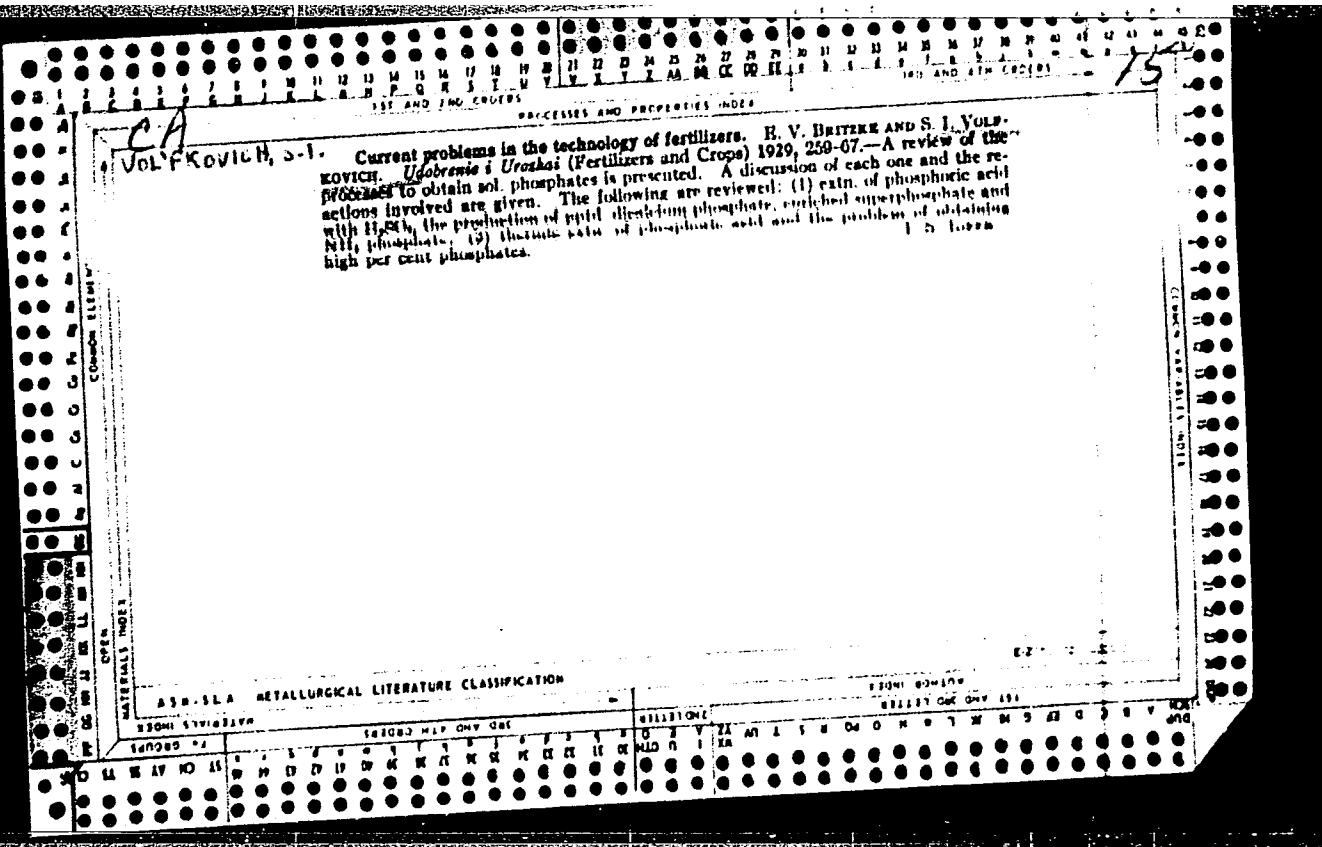
[Transactions of the First City Conference of Young Scientists, Medical Section] Trudy Pervoy gorodskoy konferentsii molodykh nauchnykh rabotnikov. Meditsinskaia sektsia. Saratov, Saratovskii meditsinskii in-t, 1963. 295 p. (MIRA 18:5)

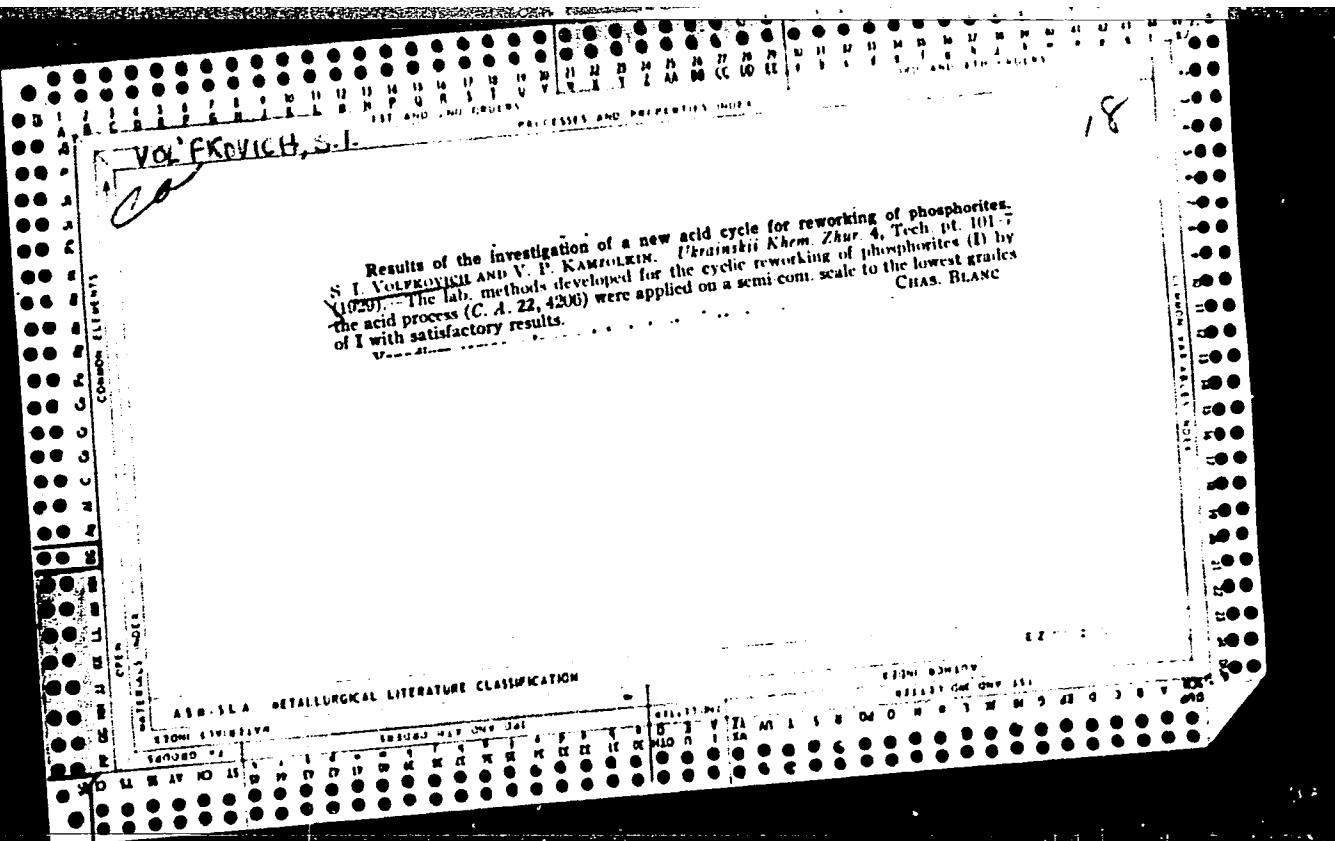
1. Gorodskaya konferentsiya molodykh nauchnykh rabotnikov. Meditsinskaya sektsiya. 1st, Saratov.

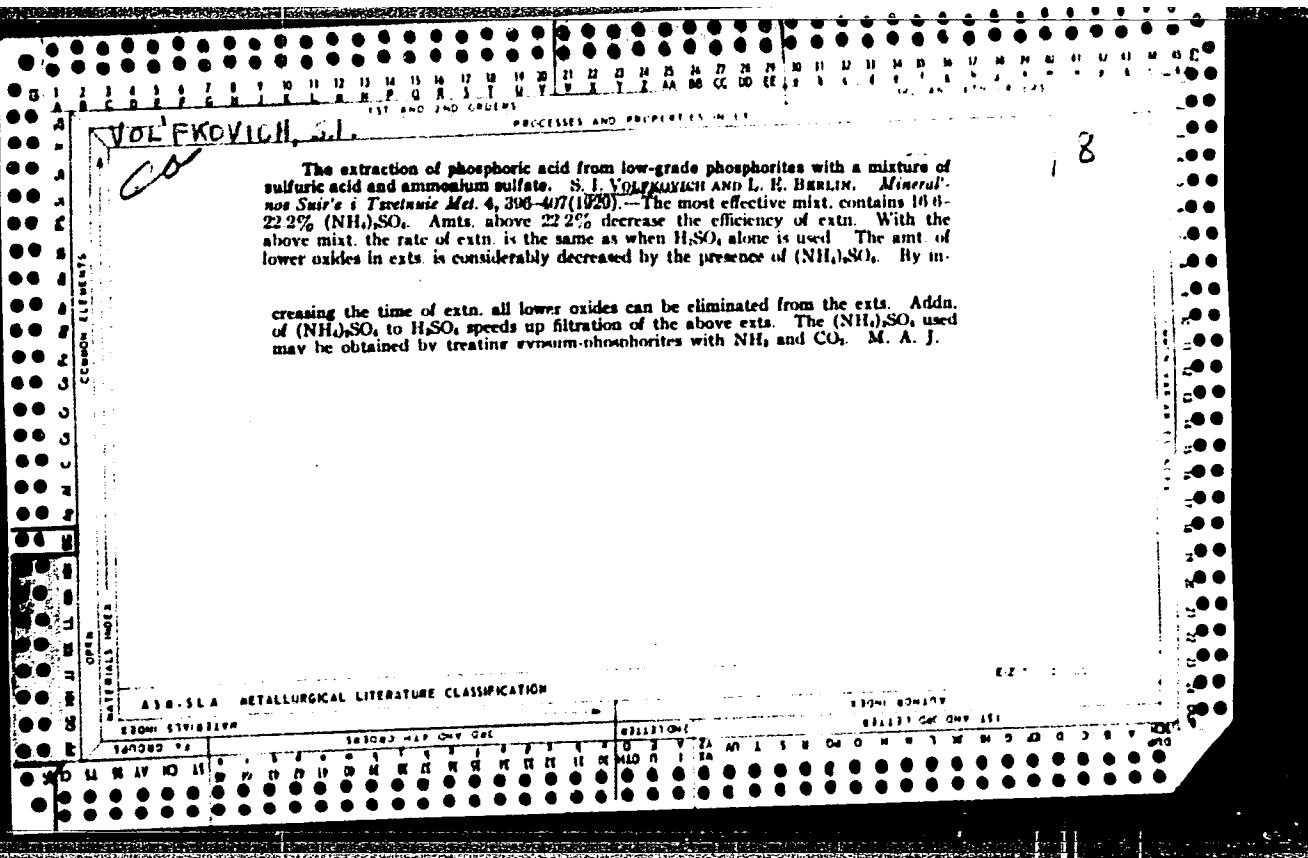


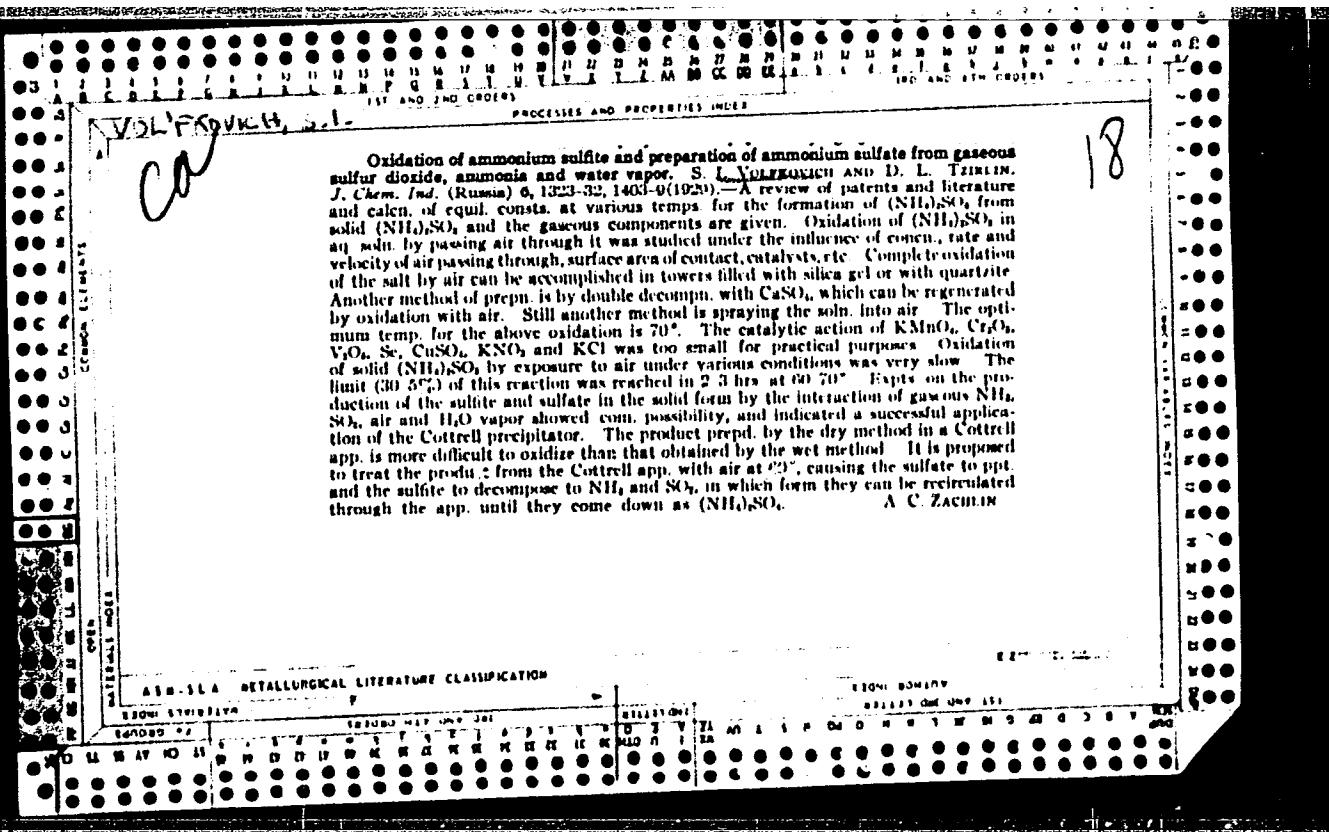


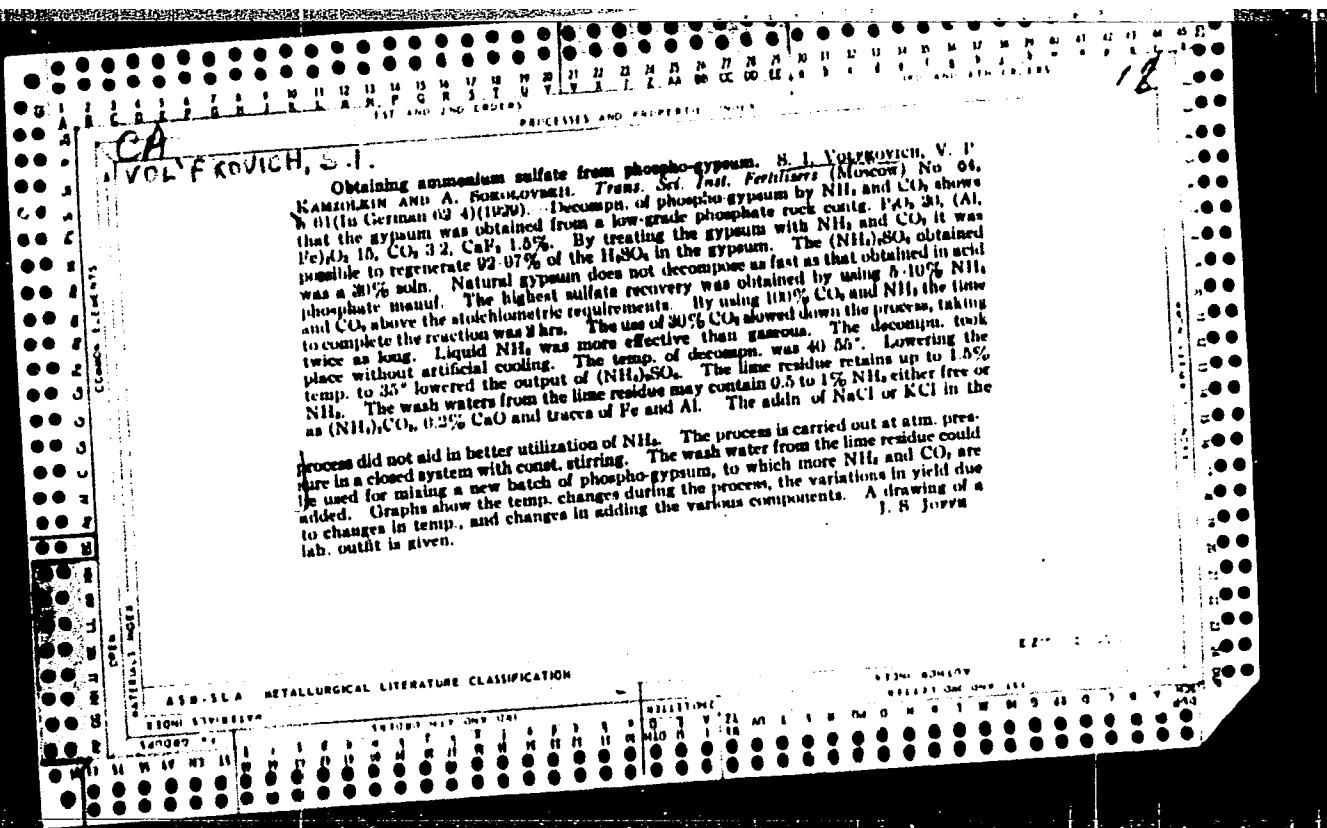


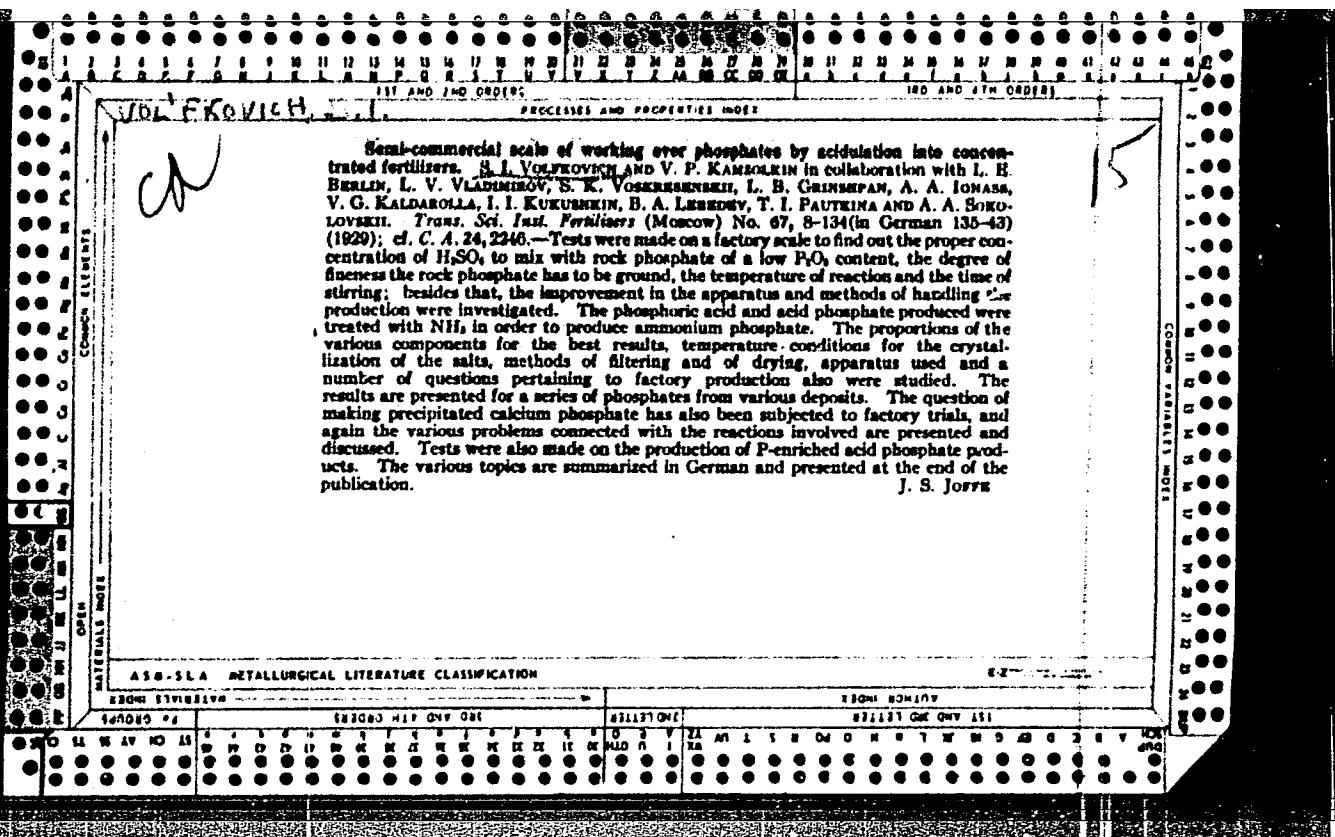


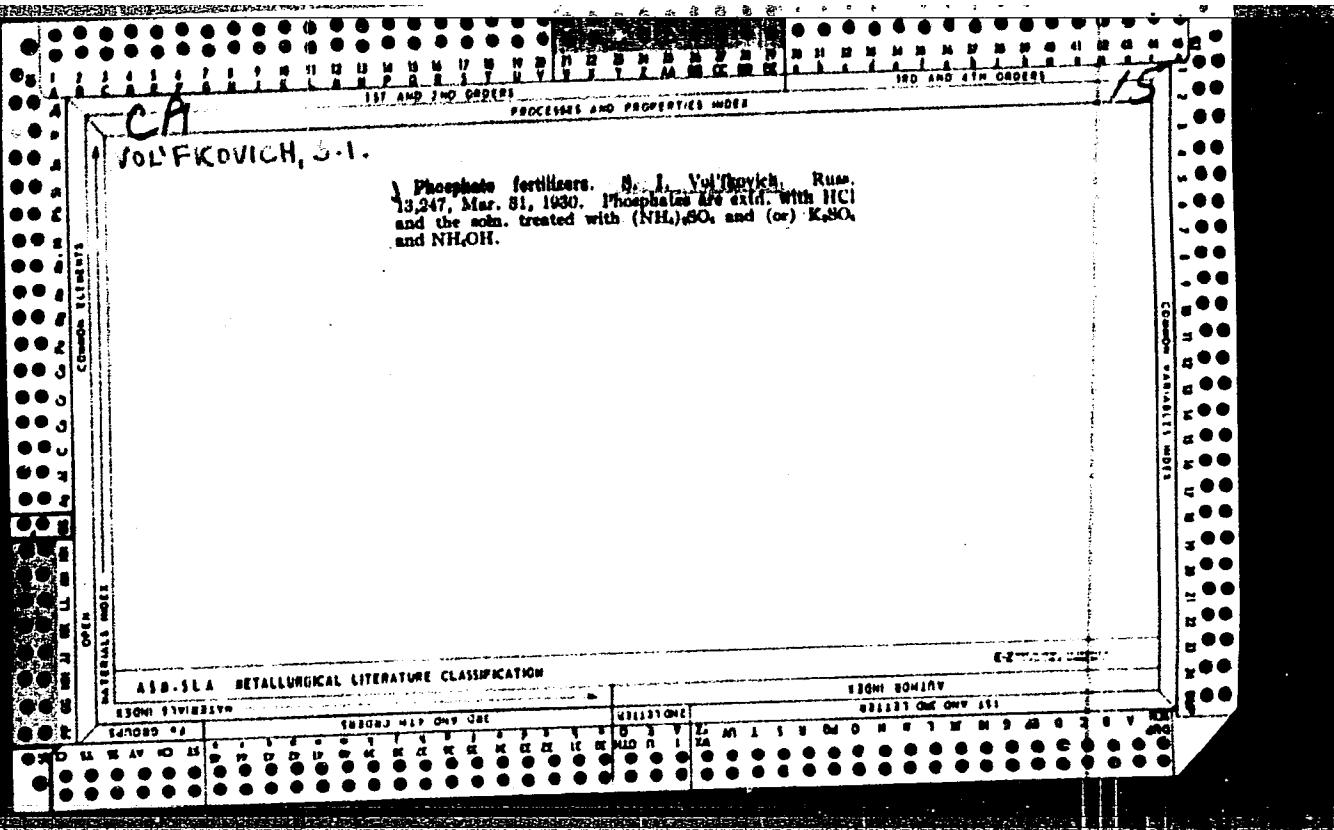


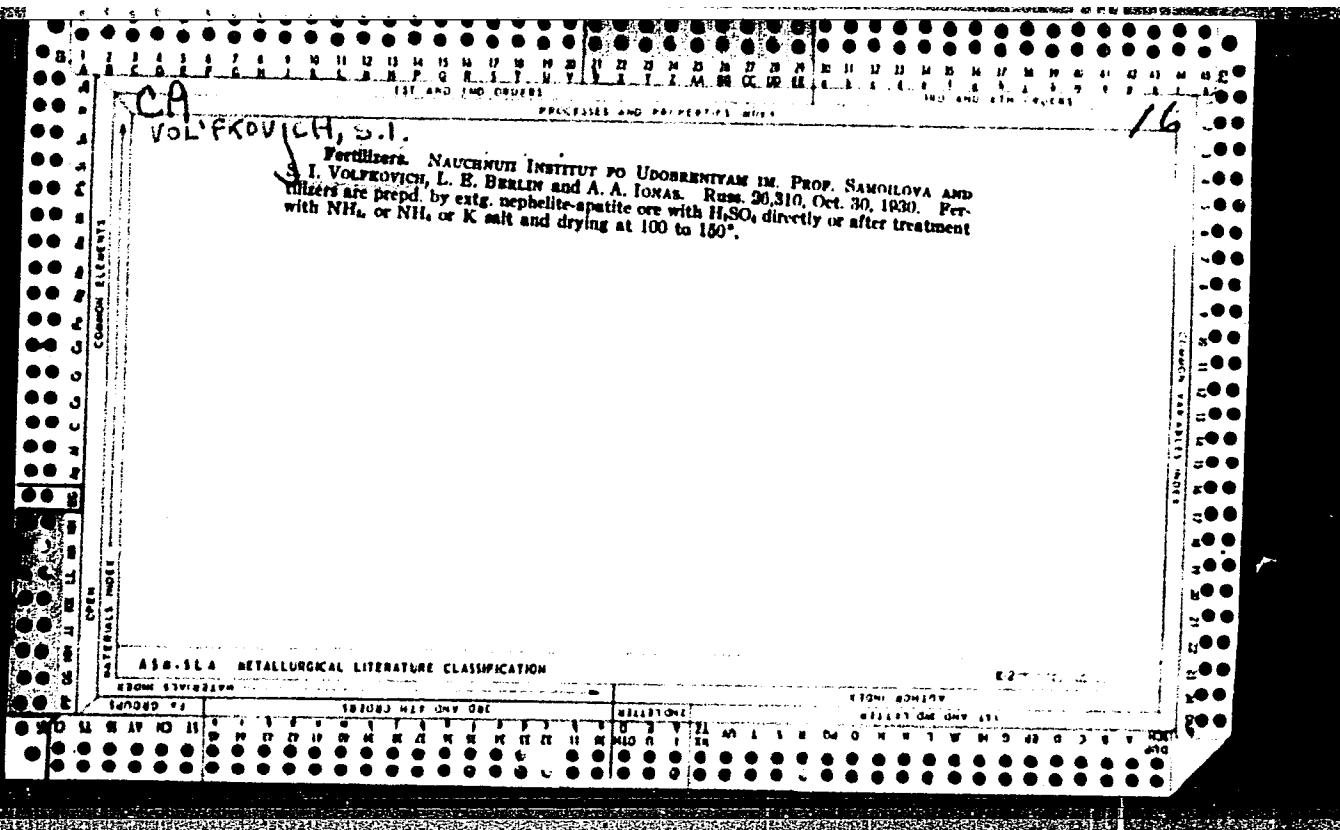


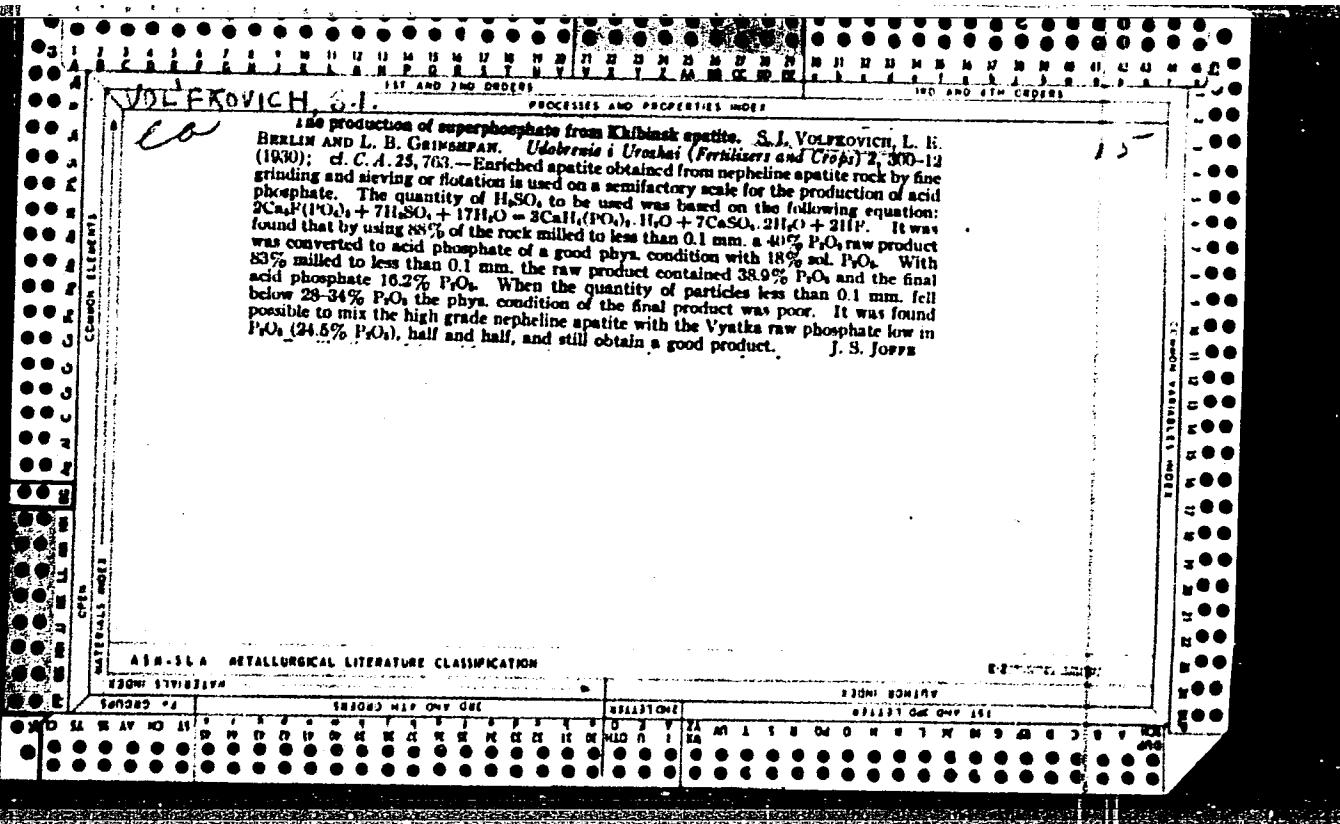


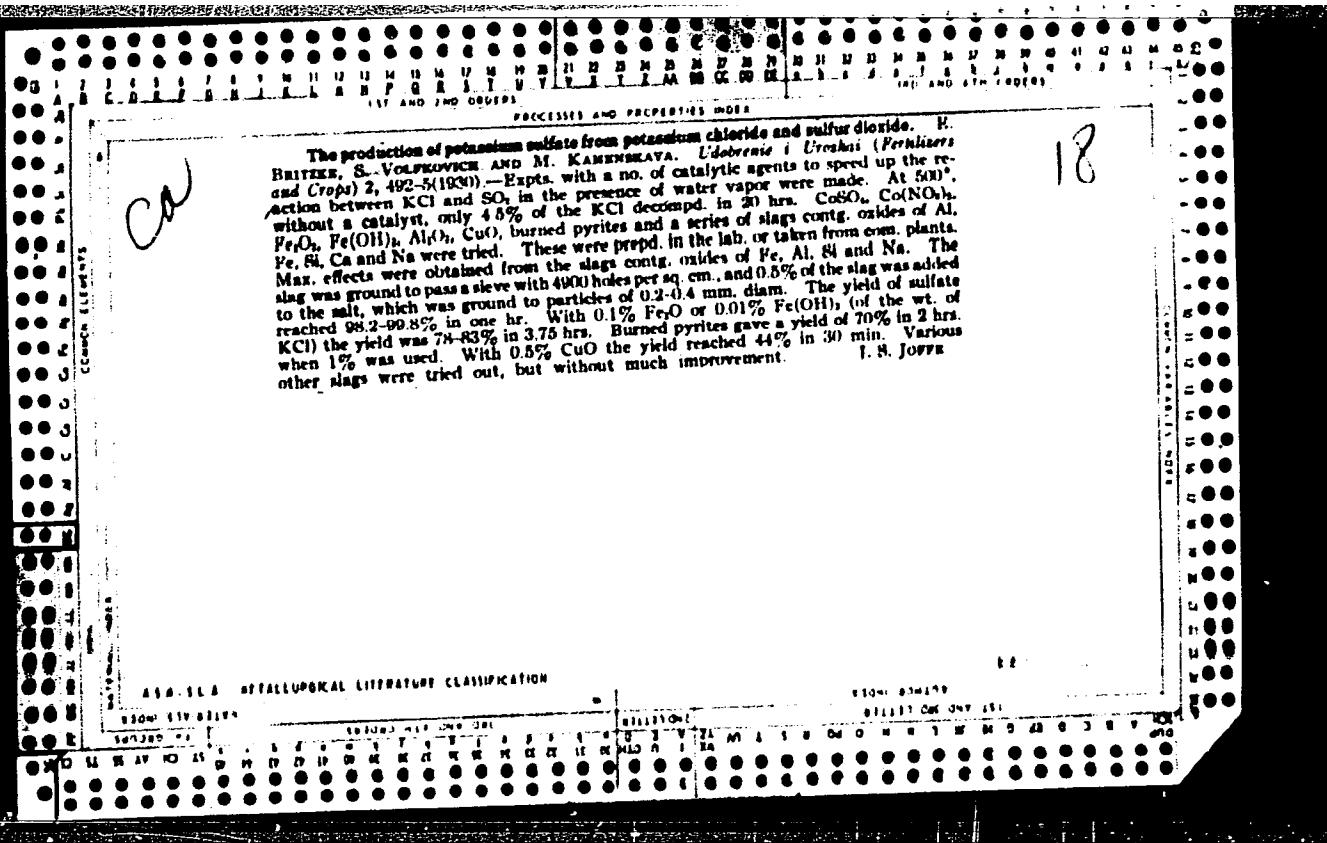












VOT'FKOVICH S.I.

Superphosphate enriched with ammonia. S. I. VOLPKOVIC, L. B. BERLIN, I. L. HOFMAN AND A. A. IONAS. *Udobrenia i Uretaki (Fertilizers and Crop) 2*, 558-69 (1930).—Two kinds of raw phosphate were tried out in the prepn. of ammoniated superphosphate by the use of H_2SO_4 and the phosphates of ammonia. From Portland phosphate with mono ammonium phosphate and H_2SO_4 a product was obtained contg. 21% P_2O_5 with 18.5% available, and 10% N. The amt. of H_2SO_4 used was 18% above that required by the stoichiometric equations, and its strength was diluted to 40% by the use of a 20% soln. of $(NH_4)_2HPO_4$. When a mixt. of mono- and di-ammonium phosphates was used, the product contained 23% P_2O_5 with 18% available, and 3% N. The H_2SO_4 was also 18% above the stoichiometric and was diluted to 30% with 20% $(NH_4)_2HPO_4$. With $(NH_4)_2HPO_4$ alone the product contained 23% P_2O_5 with 19% available, and 6% N. The H_2SO_4 was 10% above stoichiometric, and it was diluted to 25% with a 20% soln. $(NH_4)_2HPO_4$. For the Saratov phosphate triammonium phosphate (in liquid form) with H_2SO_4 was used, and the product obtained was 22-23% P_2O_5 with 20.5% available, and 10% N. The optimum conditions were: 100 parts (by weight) of phosphate for 80 parts of $(NH_4)_2PO_4$; for each unit weight of $(NH_4)_2PO_4$ 0.5 part of 60 Bé. H_2SO_4 was used besides what is necessary to convert the raw phosphate into superphosphate. By using a satd. soln. of $(NH_4)_2PO_4$ the product contained 18% P_2O_5 with 17% available, and 5% N. The reagents used, were: 100 parts of phosphate, 100 parts of the satd. soln. with 0.74 part of 60 Bé. H_2SO_4 , for each part of $(NH_4)_2PO_4$, besides what is necessary for the production of ordinary superphosphate. The best product from the stand-point of phys. conditions was obtained by the use of the mixt. of mono- and di-ammonium phosphate. Production on a semi-factory scale is under way with the mixts. mentioned.

J. S. JOPPEN

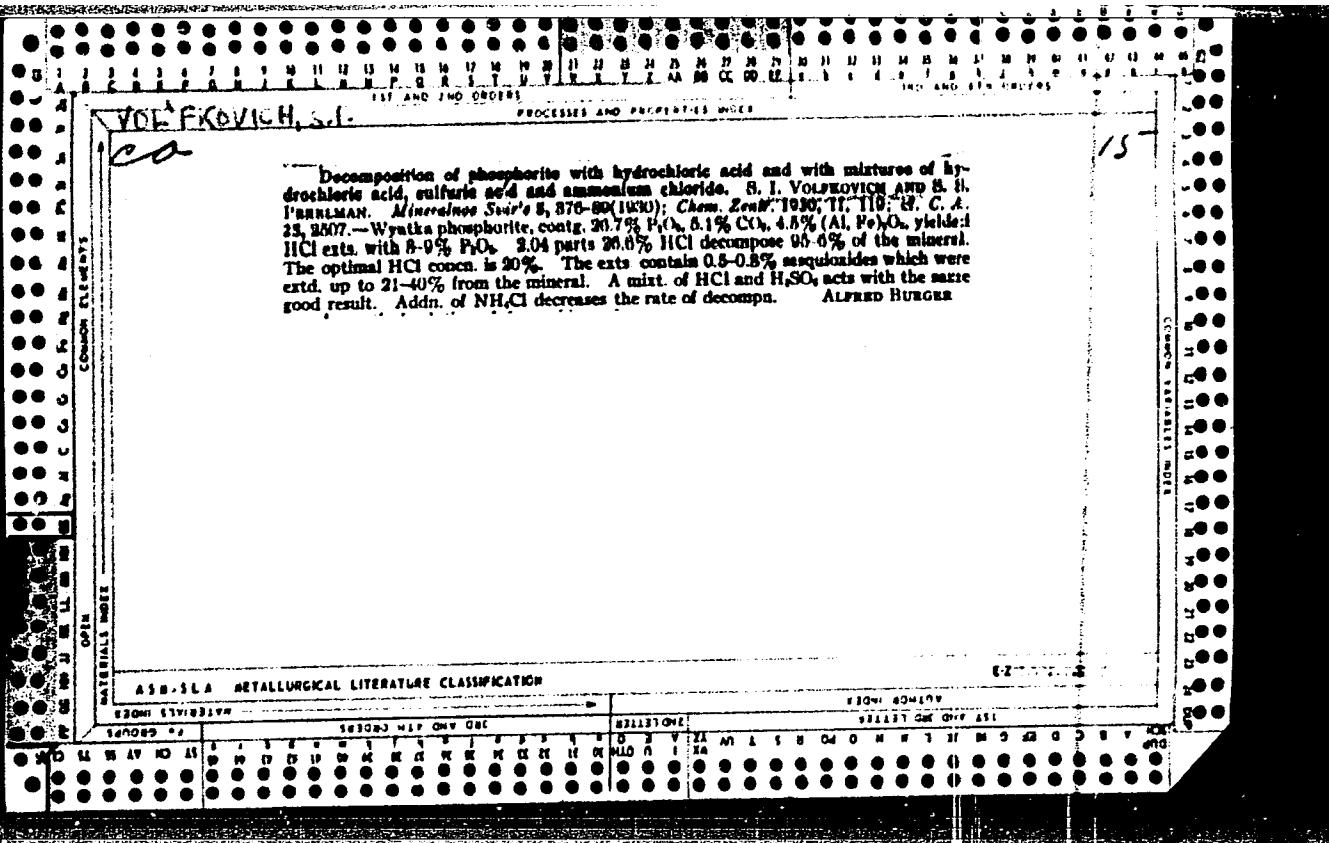
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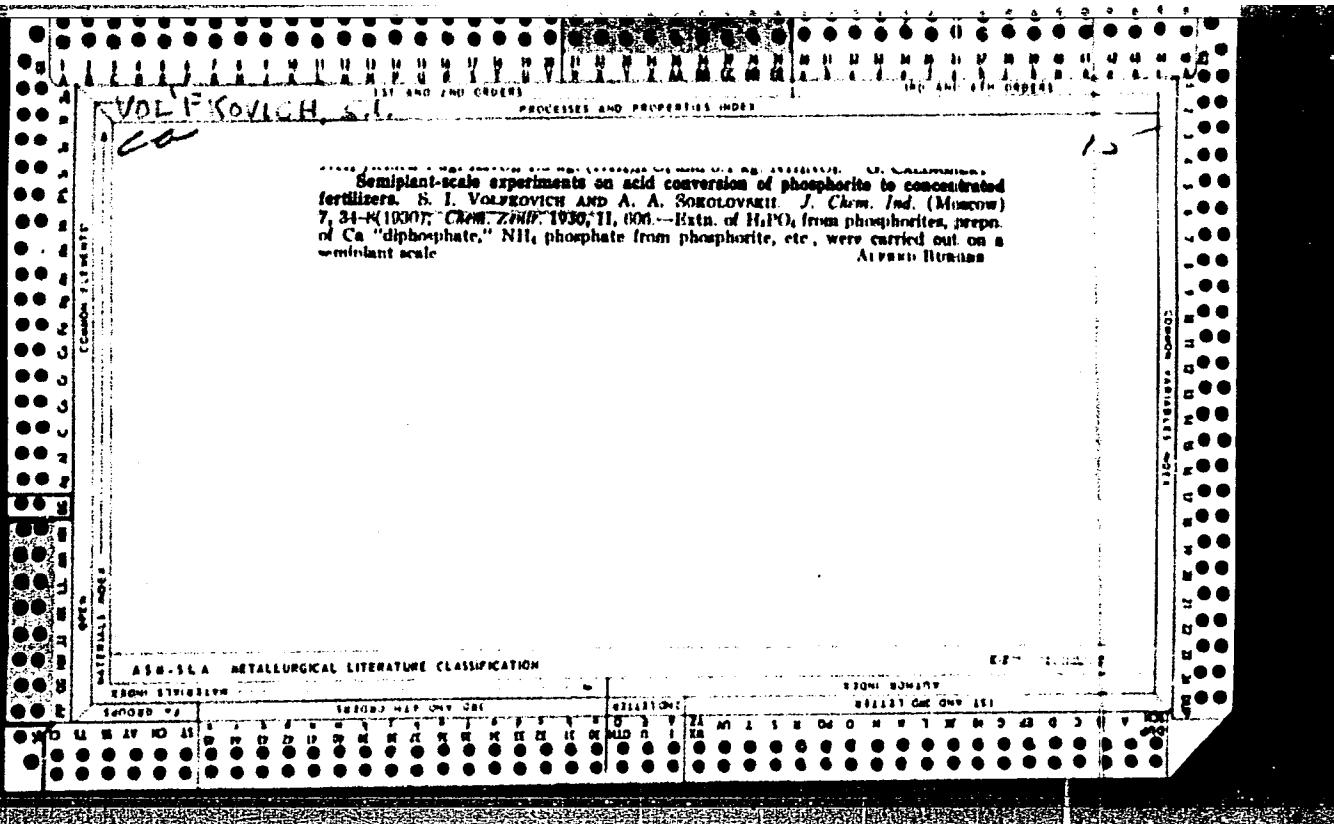
VOL'KOVICH		PROCESSES AND PROPERTIES INDEX	
		1ST AND 2ND ORDERS	3RD AND 4TH ORDERS
CO ₃		15	
<p><i>Experiments on the production of thermophosphates from the Khibinsk apatite.</i> S. I. VOL'KOVICH AND S. S. PERELMAN. <i>Udovenie i Urekhai (Fertilizers and Crops)</i> 2, 870-871 (1930).—By a flotation method a product was obtained from the Khibinsk apatite with a 40.6% P₂O₅ content. This and 2 other samples contg. 27.12 and 19.47% P₂O₅ were fused with Na₂CO₃. By using 30.3 parts of the 40.6% P₂O₅ sample for 100 parts of the phosphate at 900°-1200° a product was obtained with a 70% coeff. of decompr., the latter representing the ratio of citrate sol. P₂O₅ to the total. With a 25% excess of Na₂CO₃ the coeff. increases irrespective of the temp. from 900° to 1200°. With a 50% increase the proportionality between the Na₂CO₃ and increase in P₂O₅ disappears. At 1100° the coeff. drops from 76.3 to 60.7% and then again increases at 1200° to 92.6%. At 1300° the mixt. fuses, but there is no increase in P₂O₅. The optimum conditions were found to be at 1200° with 1.5 times the amt. of soda used originally, i. e., 45 parts of Na₂CO₃ to 100 parts of apatite. With the 27.1% P₂O₅ sample at 1000°-1200° with 20 parts of Na₂CO₃ to 100 parts of phosphate the coeff. of decompr. was 70-80%. A 25% increase of Na₂CO₃ increased the coeff. of decompr. almost to 100%. Even at 900° such a mixt. gave an 82.2% coeff. With the 19.5% P₂O₅ sample at 1200° with 22 parts of Na₂CO₃ to 100 parts of the phosphate almost 100% of the phosphate became citrate sol. Adding of 10% SiO₂ to the mixt. slightly increased the coeff. of decompr. SiO₂ alone had no effect. An increase of the SiO₂ to 20% produced neg. results. Addns. of CaCO₃ alone had no effect, but with the Na₂CO₃ an increase in the coeff. took place. The time factor of heating the mixt. brought out the fact that 30 min. gives the optimum. The cooling of the mixt. immediately after 30 min. heating increased the solv. of the product. Heating with various chlorides gave neg. results. With Na₂SO₄ and charcoal a product was obtained with a coeff. of 80%. Vegetation expts. with thermophosphates show that it is just as good as Thomas mag. but it is slightly inferior to superphosphate.</p> <p style="text-align: right;">J. S. JOFFE</p>			
ABSTRACTS METALLURGICAL LITERATURE CLASSIFICATION			
ECONOMIC LITERATURE		TECHNICAL LITERATURE	
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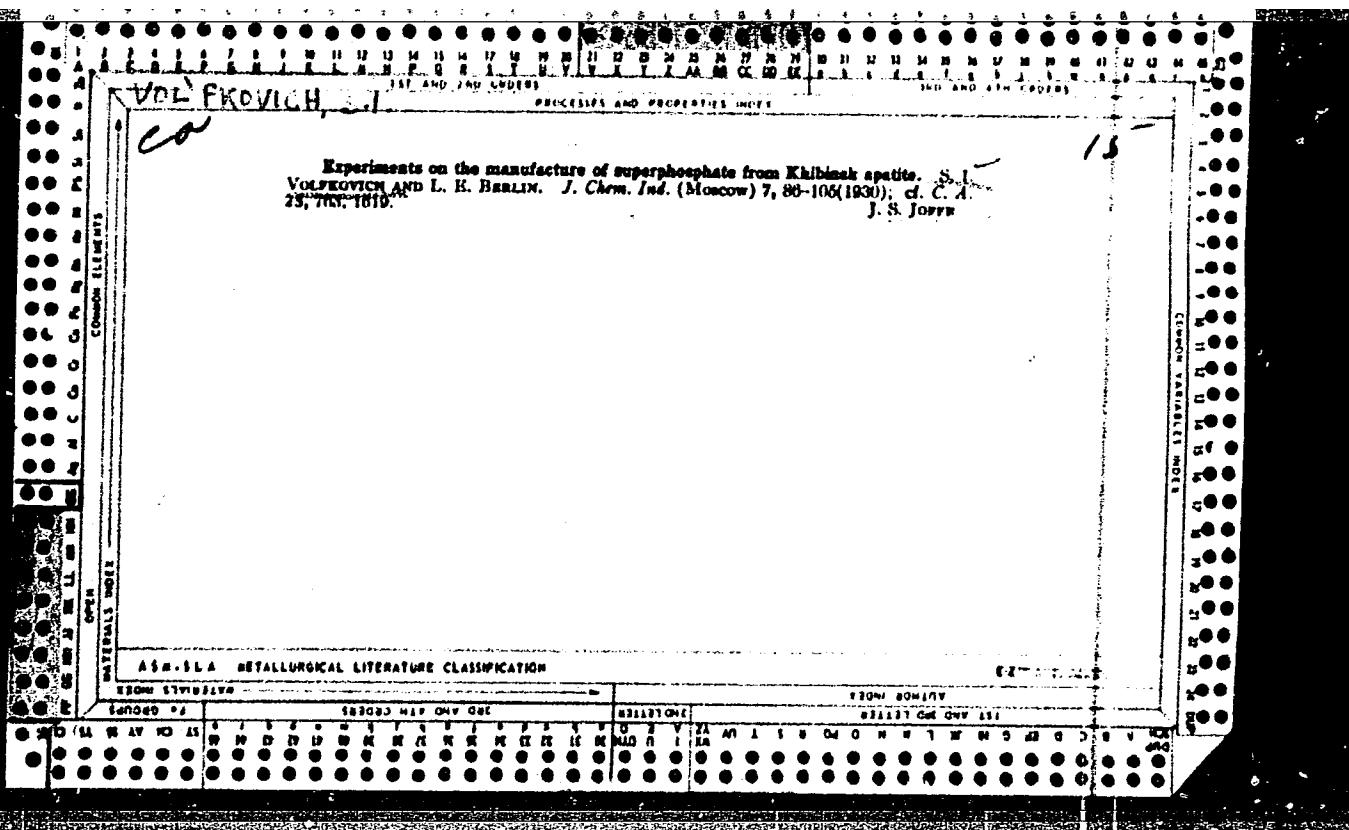
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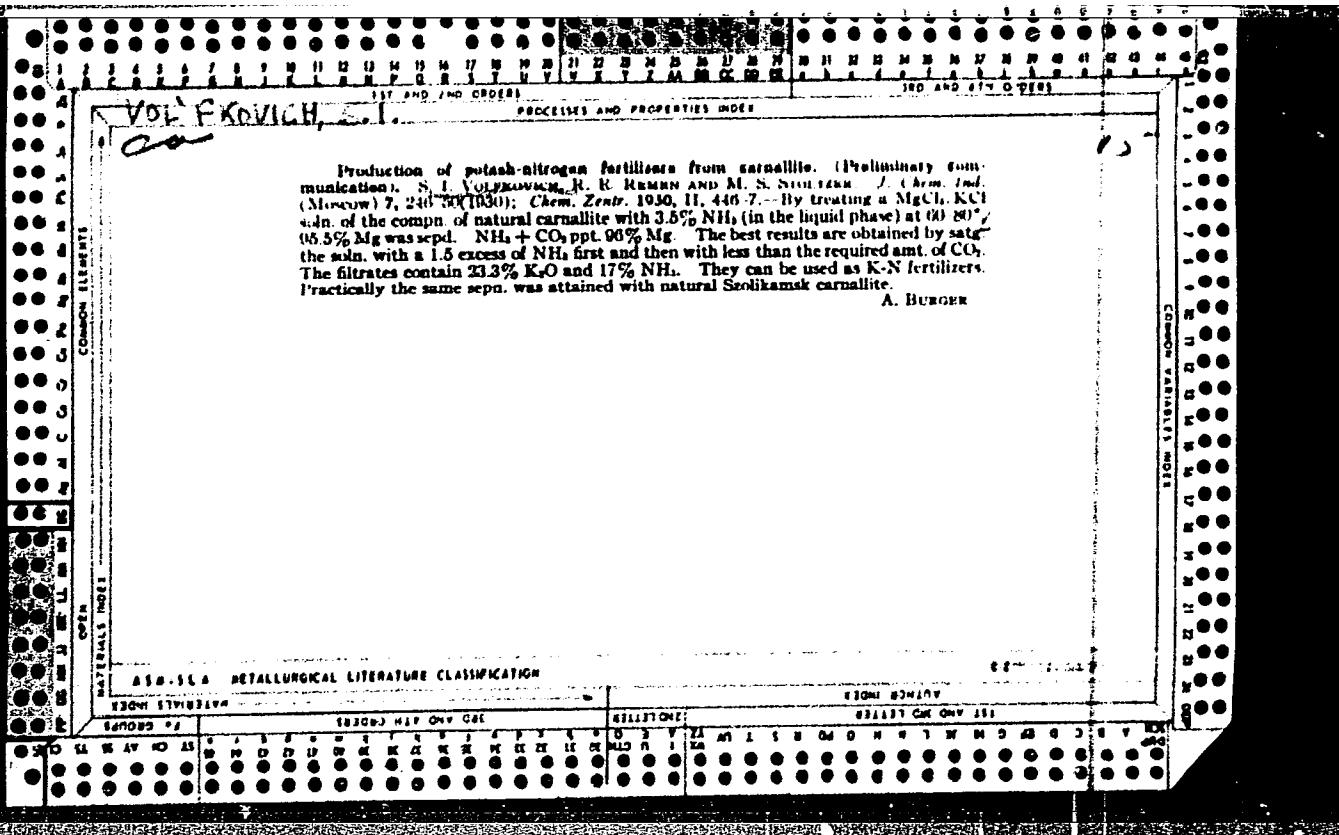
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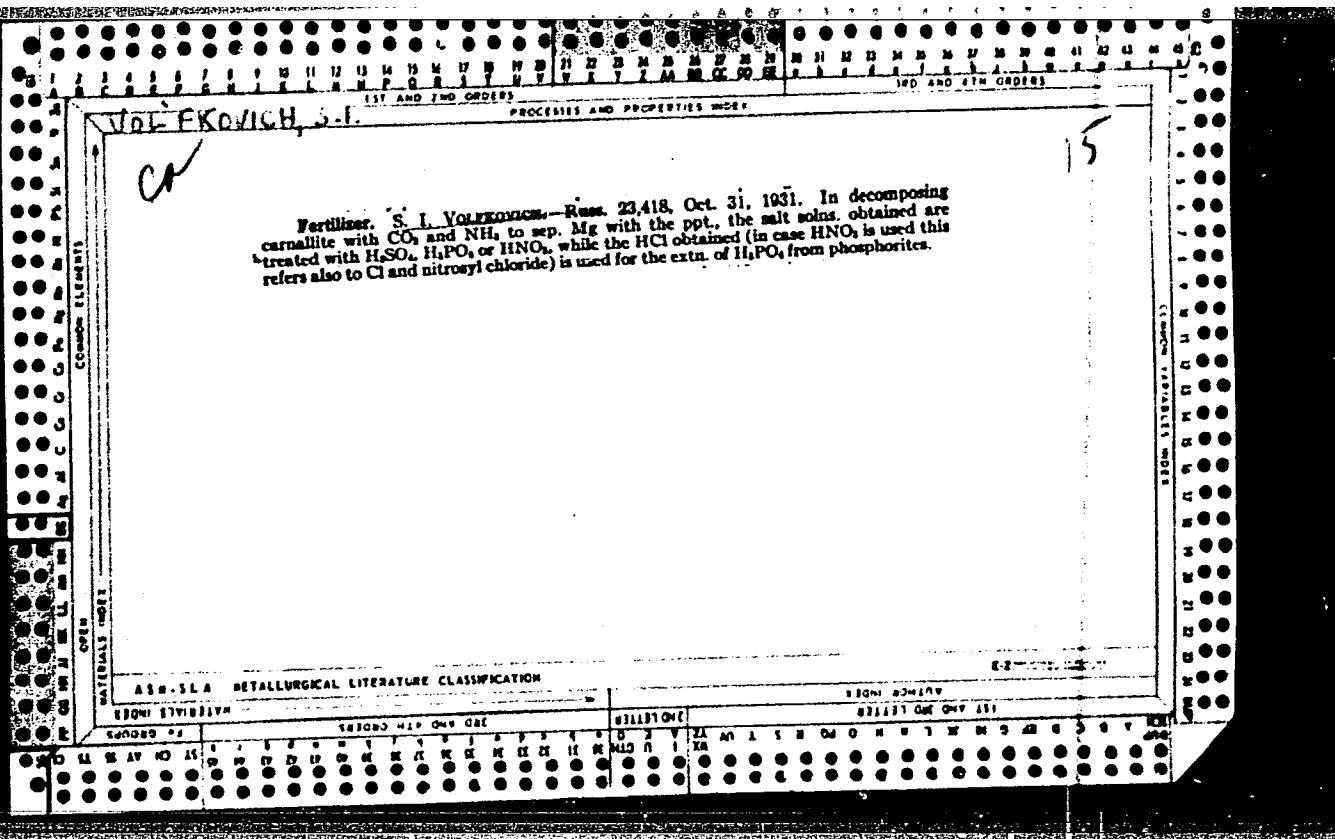


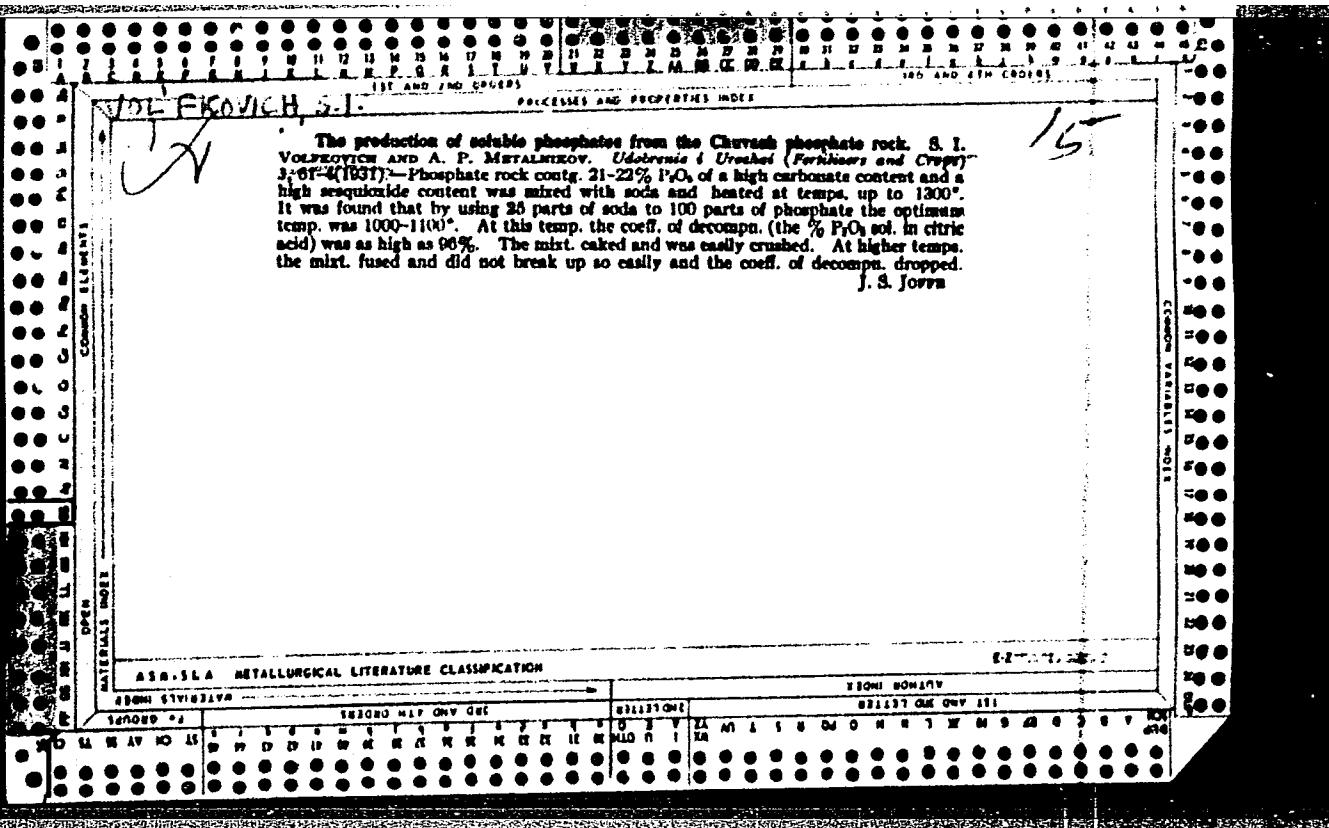
Decomposition of phosphorite with hydrochloric acid and with mixtures of hydrochloric acid, sulfuric acid and ammonium chloride. S. I. VOLKOVICH AND S. B. L'BRILMAN. Mineralogist Star's 8, 876-80 (1930); Chem. Zentralbl. 1930, II, 118-13. C. A. 23, 2007.—Wyratka phosphorite, contg. 20.7% P_2O_5 , 0.1% CaO, 4.8% $(Al, Fe)_2O_3$, yielded HCl extd. with 8-9% P_2O_5 . 3.04 parts 30.0% HCl decompose 95-96% of the mineral. The optimal HCl concn. is 20%. The exts contain 0.5-0.8% sesquioxides which were extd. up to 21-40% from the mineral. A mixt. of HCl and H_2SO_4 acts with the same good result. Addn. of NH_4Cl decreases the rate of decompn. ALFRED HUGER

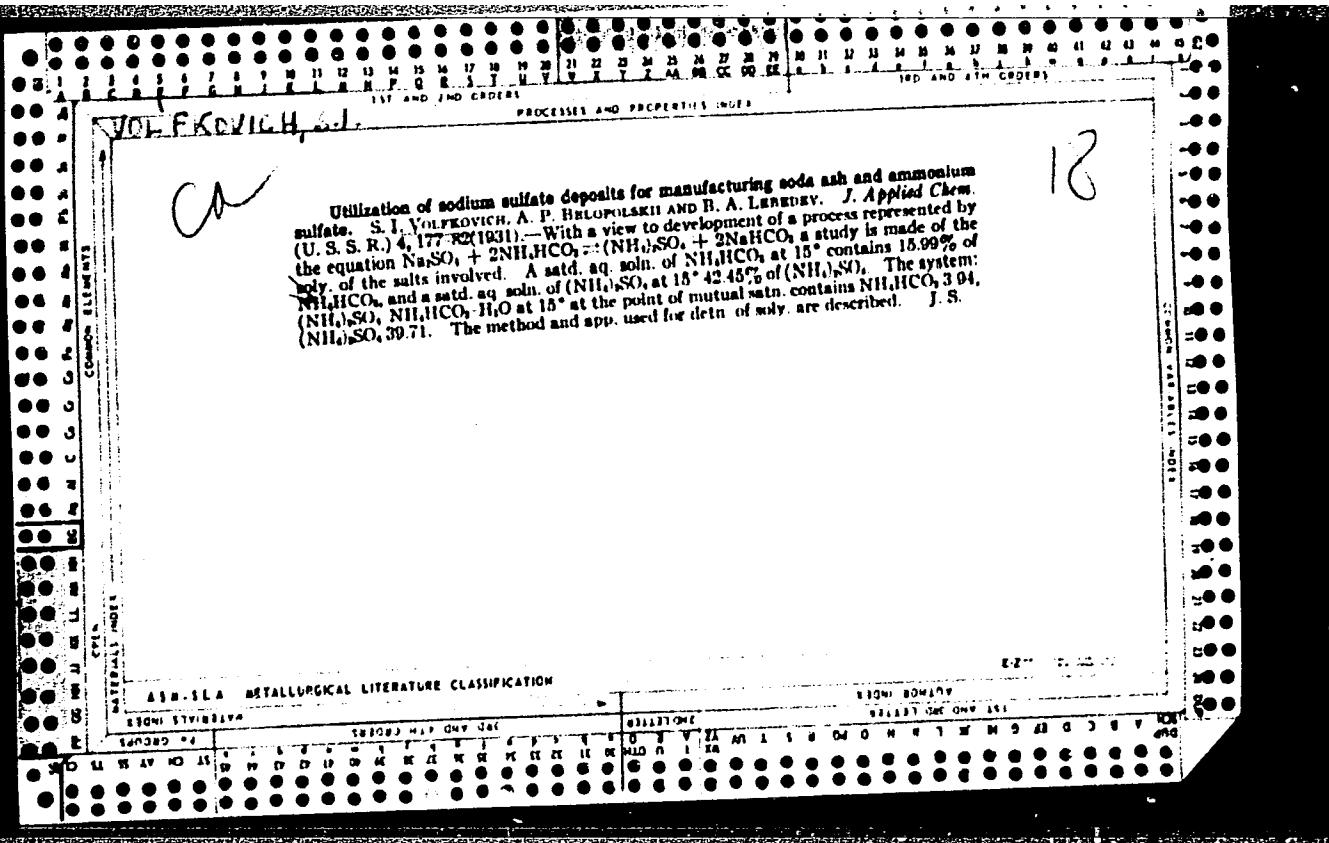


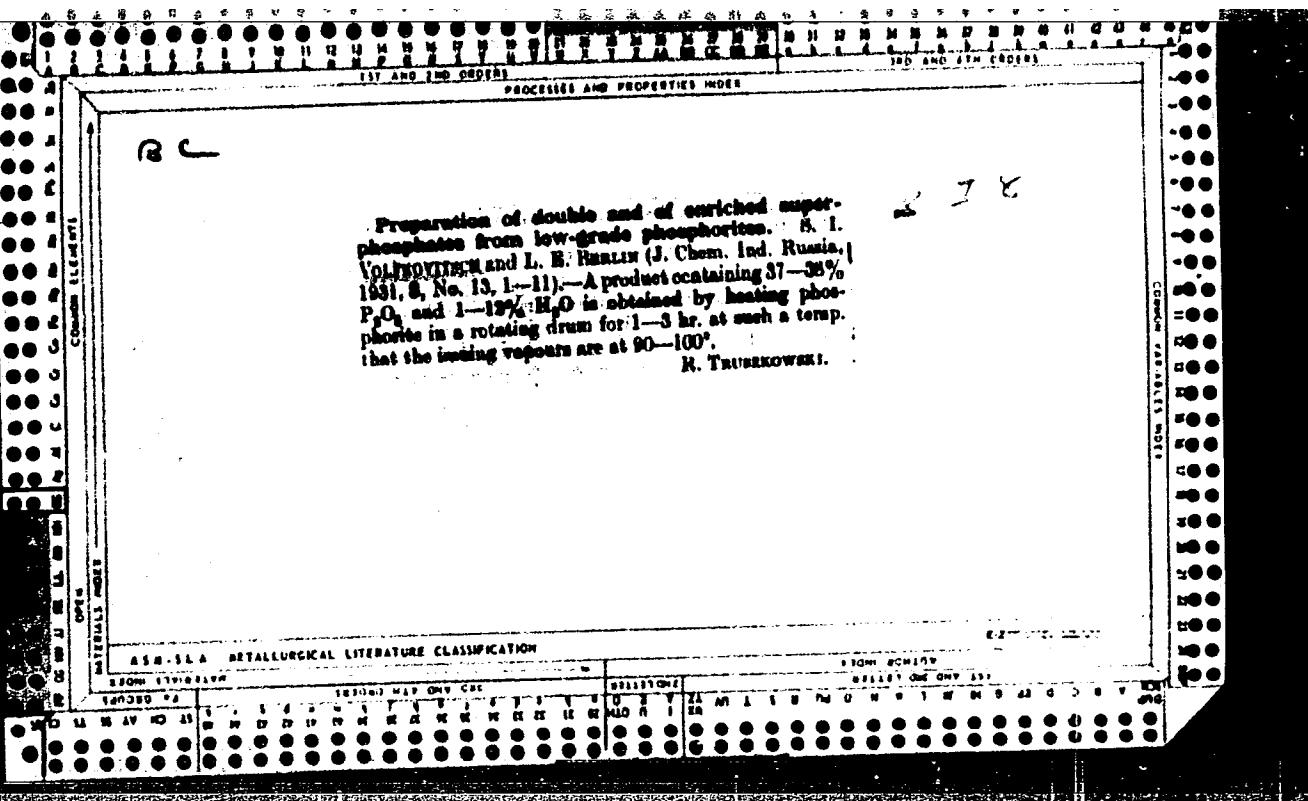












YUL'F KOL'ICH, et al.

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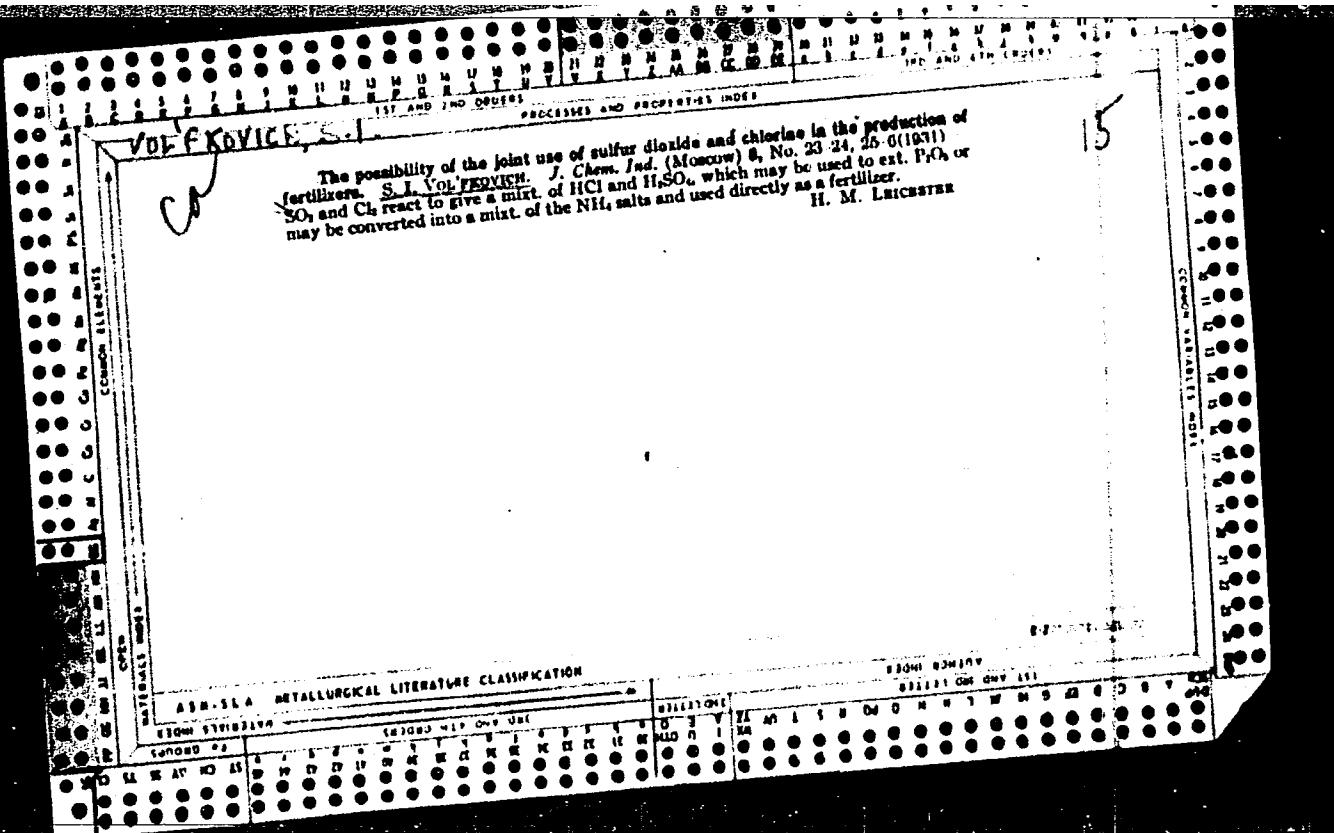
Decomposition of Khilbin apatite-nephelite ore by sulfuric acid. S. I. VOL'KOVICH,
 L. BERLIN, A. VIMOKUROVA AND A. SALOVA. *J. Chem. Ind. (Moscow)* No. 15-16,
 1-4(1931).—The order of decreasing rapidity of decompr. of the minerals in this ore by
 H_2SO_4 is nephelite, apatite, titanomagnetite and egirite. The amts. of acid used for

minerals of these must be the sum of the amts. used to dissolve the individual minerals.
 When small amts. of egirite are present, however, they may be disregarded. Since the
 SiO_4 gel formed on decompr. of apatite-nephelite ore by acid tends to cover up the
 phosphate and prevent soln., it is best to use strong acid and very finely ground ore.
 High temps are no help. The amt. of acid in excess of the theoretical amt. must be
 detd. empirically. The apatites, in general, decomp. more slowly than other phosphate
 ores. H. M. LIECKSTEIN

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VOL'KOVICH, S. I.

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The achievements of the phosphate fertilizer industry
and the scientific investigations in the U. S. S. R. for
the last 15 years (1917-1932). S. I. Volkovich. *Gosu-
darstv. Khimiko-Tekhn. Izdatelstvo (Moscow-Tallin)*
1932, 1-44.—V. takes up the progress made in the pro-
duction of phosphate fertilizers and discusses the theo-
retical chem. and physicochem. background of the new
processes developed. J. S. Joffe

ASA-11A METALLURGICAL LITERATURE CLASSIFICATION

VOL'F Koyich, S.L.

PROCESSES AND PRODUCTS

The use of gypsum and phosphogypsum in chemical industry and rural economy, S. I. VOL'KOVICH AND A. A. SOKOLOVSKII, *J. Chem. Ind.* (Moscow) 1932, No. 15, 23. The sources of CaSO_4 in the U. S. S. R. are discussed, and recent Soviet work on its use is reviewed. H. M. LISTERSTADT

H. H. LEICESTER

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION
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VOL'FKEVICH, D-1.

PROCESSED AND APPROVED BY

Physicochemical investigation of the process for manufacturing ammonium phosphates (ammophos). S. I. VOL'FKEVICH, L. E. BERLIN AND B. M. MANTOV. J. Applied Chem. (U. S. S. R.) 5, 1-14 (1932).--The alk. part of the isotherm H₂O-NH₄-P₂O₅-SO₄ has been investigated at 25°. Solv. of NH₄H₂PO₄ increases greatly in presence of (NH₄)₂HPO₄, while that of (NH₄)₂HPO₄ increases only slightly on addn. of NH₄H₂PO₄. Solv. of (NH₄)₂HPO₄ is lowered about 1/2 in the presence of (NH₄)₂HPO₄·3H₂O. Solv. of (NH₄)₂HPO₄·3H₂O decreases about 4 times in the presence of small quantities of (NH₄)₂HPO₄, but remains const. on further addns. Solv. of NH₄ phosphates is lowered about 1/2 in the presence of (NH₄)₂SO₄. Solv. of (NH₄)₂SO₄ is lowered somewhat in the presence of (NH₄)₂HPO₄ or (NH₄)₂PO₄, but first slightly increased and then lowered on adding successive quantities of NH₄H₂PO₄. The concn. of P₂O₅ at the binary point NH₄H₂PO₄-(NH₄)₂HPO₄ is lowered by 1.6 and at the binary point (NH₄)₂HPO₄·3H₂O-(NH₄)₂HPO₄; it is increased by 3 in presence of (NH₄)₂SO₄. Addn. of NH₄ to satd. NH₄H₂PO₄ soln. first increases greatly the P₂O₅ content of soln. up to the binary point (NH₄)₂HPO₄·NH₄H₂PO₄, but then lowers it practically to zero when NH₄ concn. is high. A similar effect is observed on adding NH₄ to a soln. of (NH₄)₂SO₄ and NH₄H₂PO₄. On adding NH₄ to a soln. contg. H₂PO₄⁻ or H₂PO₄⁻ and H₂SO₄, the (NH₄)₂PO₄·3H₂O in the ppt. is almost free of sulfate and contains practically all of the P₂O₅ (provided SO₄:P₂O₅ is not over 4:1). The use of (NH₄)₂SO₄ permits pptn. of not over 1/2 of the P₂O₅ in the soln. Double salts contg. NH₄, phosphate and sulfate were not found. V. KALICHURSKY

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

STANDARD INDEX

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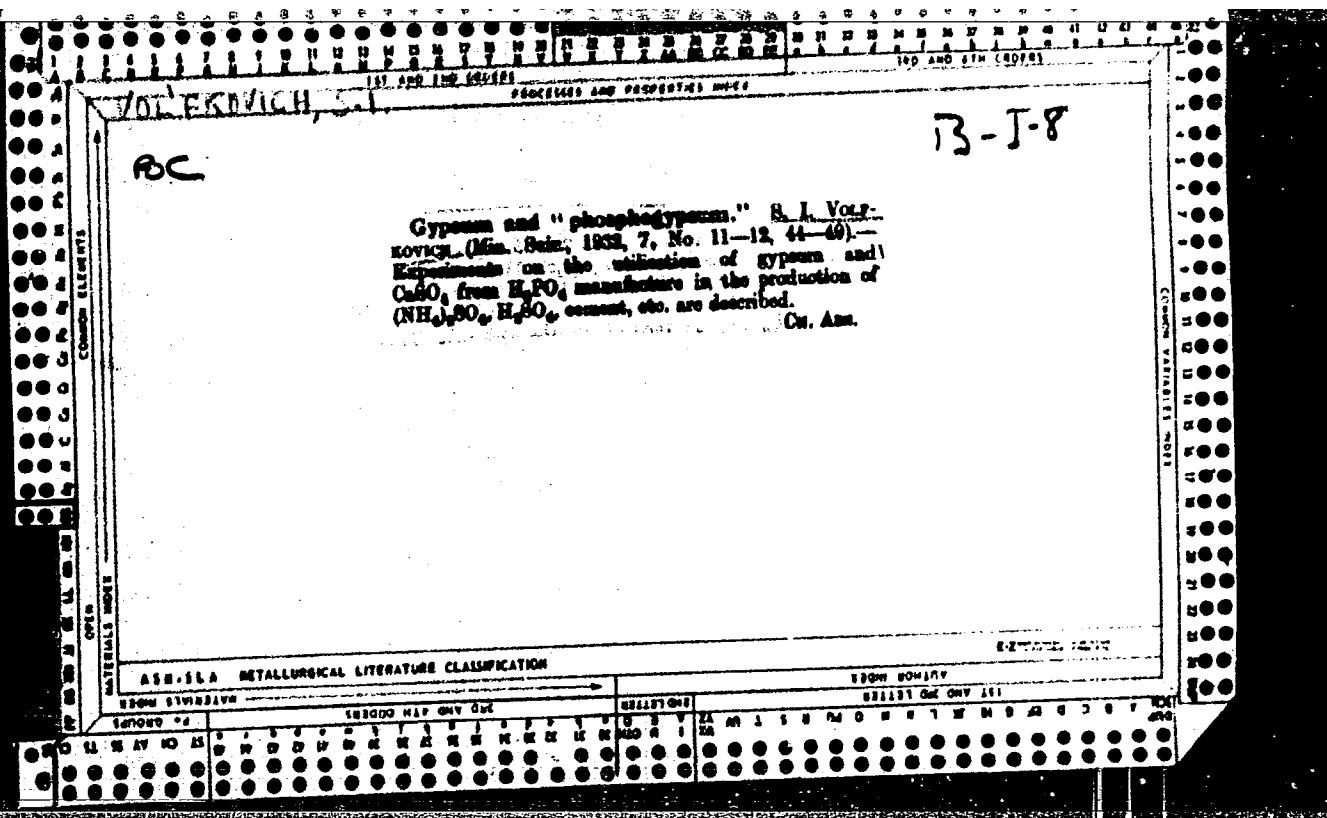
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VOL'FKOVICH, S. I.

Oxidation of sulfides. I. S. I. VOL'FKOVICH AND A. P. BUKOVSKIY. *J. Applied Chem. (U. S. S. R.)* 5, 300-28 (1952).—Oxidation of K_2SO_3 in aq. soln. with O_2 was studied. At a const. rate of O_2 flow the increase in K_2SO_3 concn. lowers the rate of oxidation. At a const. K_2SO_3 concn. the increase in the rate of O_2 flow increases the rate of oxidation up to a certain max. beyond which a further increase in the rate of O_2 flow is without effect. At this max. the reaction is monomol. but after 94% K_2SO_3 is oxidized the value of the reaction const. falls off. The rate of the reaction approx. doubles by raising the temp. from 0 to 10° at the limiting O_2 rate. II. *Ibid* 5:29-61.—The reaction is exceedingly slow at high and low p_H concns. In oxidizing at 0° a 0.373 molar K_2SO_3 for 8 min. 63% was oxidized when $p_H = 8.2$; 3% at $p_H = 4.2$; none was oxidized at $p_H = 12$. The initial H^+ concn. increases during the reaction if $p_H > 8$ but remains const. if $p_H < 8$. The falling off of the reaction const. when initial $p_H > 8$ is explained by the accumulation of H^+ . Oxidation proceeds differently in acid and alk. media. $CoSO_4$ is a very effective catalyst. At $p_H = 7.0$ other catalysts are effective in the following order: $FeSO_4$, $CuSO_4$, $NiSO_4$, $MnSO_4$, inactive. At $p_H = 9.0$: $CuSO_4$, $NiSO_4$, $MnSO_4$; $FeSO_4$, inactive. In highly alk. medium: $NiSO_4$, $CoSO_4$, $CuSO_4$, $FeSO_4$ and $MnSO_4$, inactive. III. *Ibid* 5:32-6.—Solid K_2SO_3 is not oxidized with dry O_2 at 25-80°, but the reaction proceeds if O_2 is moist. $CaSO_4$ is not oxidized at 25-110° even when suspended in water. The reaction proceeds, however, in the presence of $CoSO_4$, $MnSO_4$ or $CuSO_4$ (alum has very little effect). V. KATENKOV

ASH-3LA METALLURGICAL LITERATURE CLASSIFICATION



VOL'F KOVICH, S. I.

PRESENT AND PAST INDEXES

The production of ammonium sulfate from sulfur dioxide, ammonia and water vapor, and the oxidation of ammonium sulfite. S. I. Volkovich and D. L. Tzirlin. *Trans. Sci. Inst. Fertilizers (Moscow)*, No. 92, 78 (1971) (M27).—(NH₄)₂SO₃ was oxidized to (NH₄)₂SO₄, silica gel being used as catalyst. The optimum temp. was 70°. With an increase in concn. of sulfite, the speed of the reaction decreases. Tests with KMnO₄, Cr₂O₃, V₂O₅, Se, CuSO₄, KNO₃ and KCl as catalysts failed. Expts. with the Cottrell app. for the production of a mixt. of NH₄ sulfites and sulfates, using NH₃, SO₂, air and H₂O vapor, proved successful. The dry salt produced in this manner did not oxidize as fast as in soln.

J. S. Joffe

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

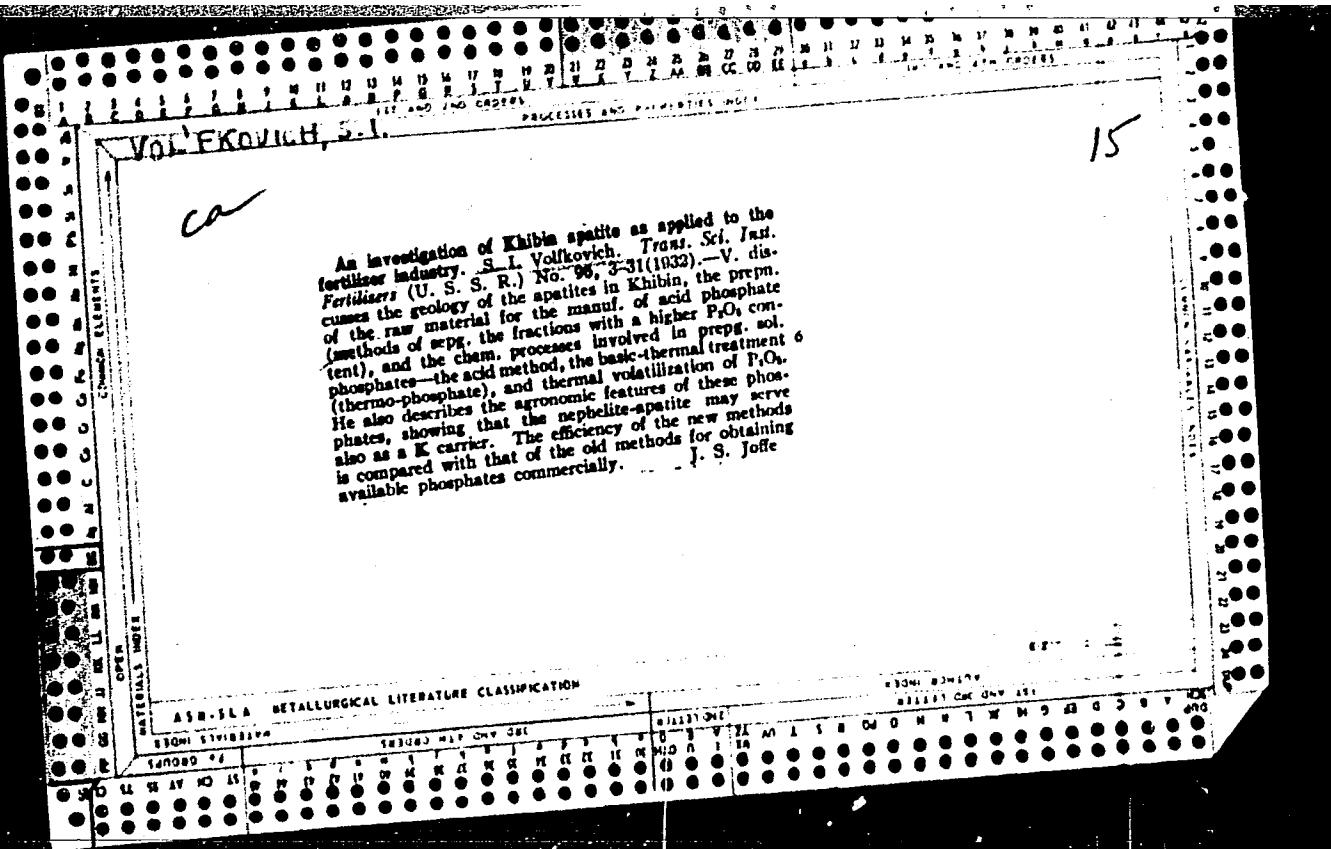
VOL'FKOVICH, S.I.

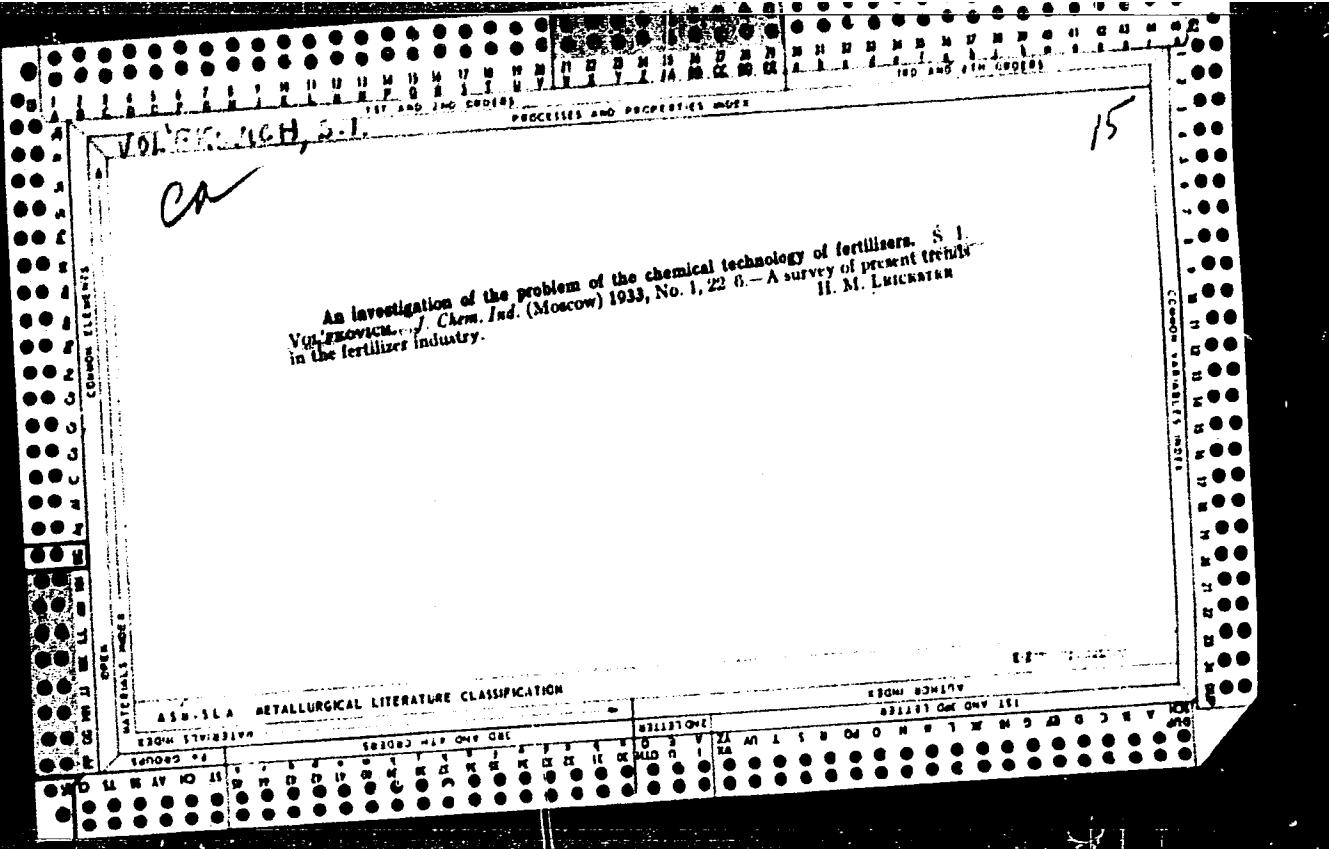
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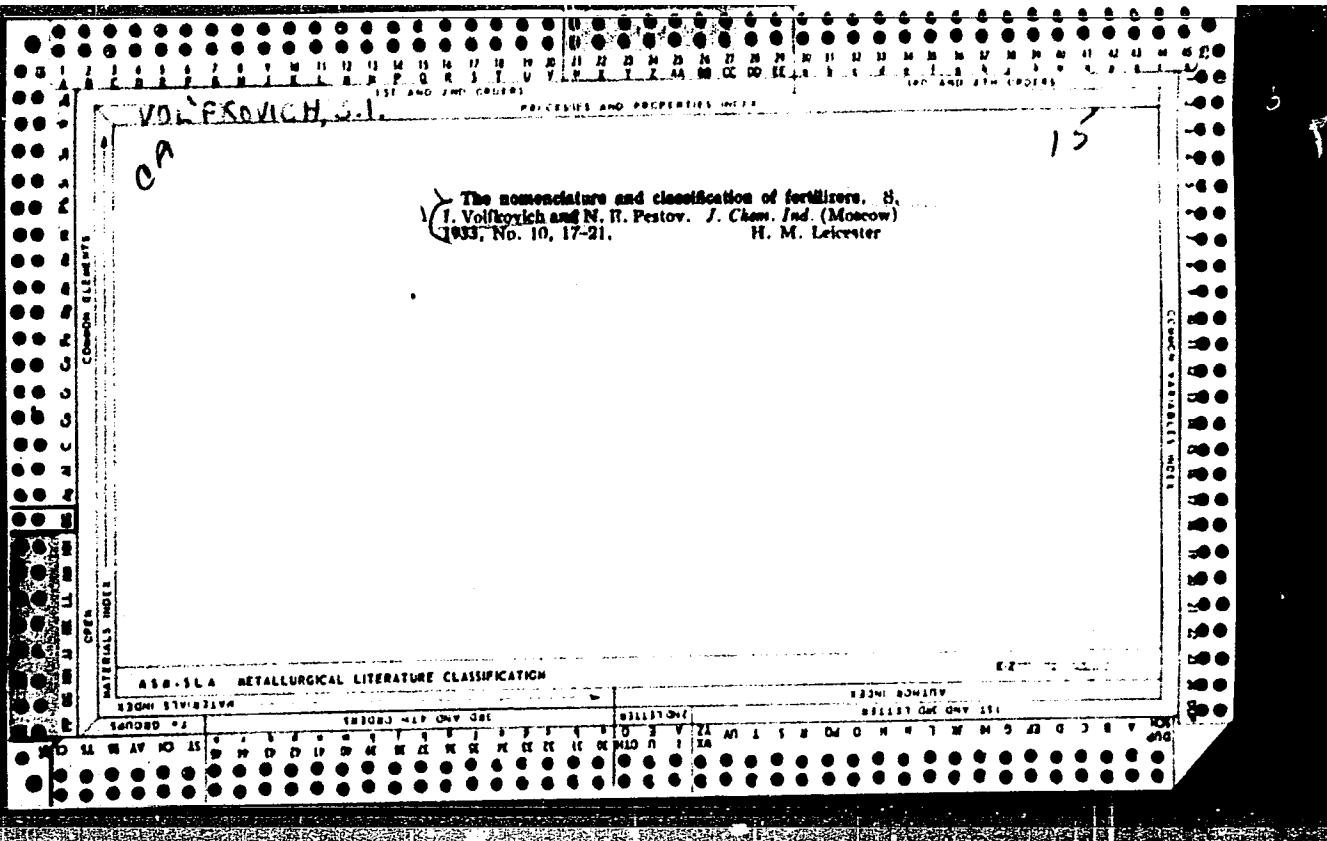
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The conversion of Khibin apatite into fertilizers. —
I. Volkovich, et al. *Trans. Soc. Inst. Fertilizers* (U. S.
S. R.) No. 95, 3-64 (1932). —The authors discuss the
manuf.: (1) of ordinary acid phosphate from Khibin
apatite, (2) of phosphoric acid by acid extrn. methods,
(3) of concd. fertilizers from the phosphoric acid extr.,
(4) of thermo-phosphate and (5) of electrothermal
volatilization of P_2O_5 . Raptl. data are given. Dia-
grams, charts, curves and tables illustrate the phases
discussed.
J. S. Jaffe

410-118 METALLURGICAL LITERATURE CLASSIFICATION







VOL'F KOVICH, S.A.

New sources and methods for producing boron compounds. S. I. Volkovich. *J. Chem. Ind. (Moscow)* 1933, No. 10, 56-7. Datolite is ignited at 800-850°, then mixed with H_2SO_4 for 30 min. at 80°. The concd. ext., filtered from $CaSO_4$, is boiled with $CaCO_3$ to remove heavy metals, and further concd. to yield HB_2O_4 .
H. M. Leicester

H. M. Leicester

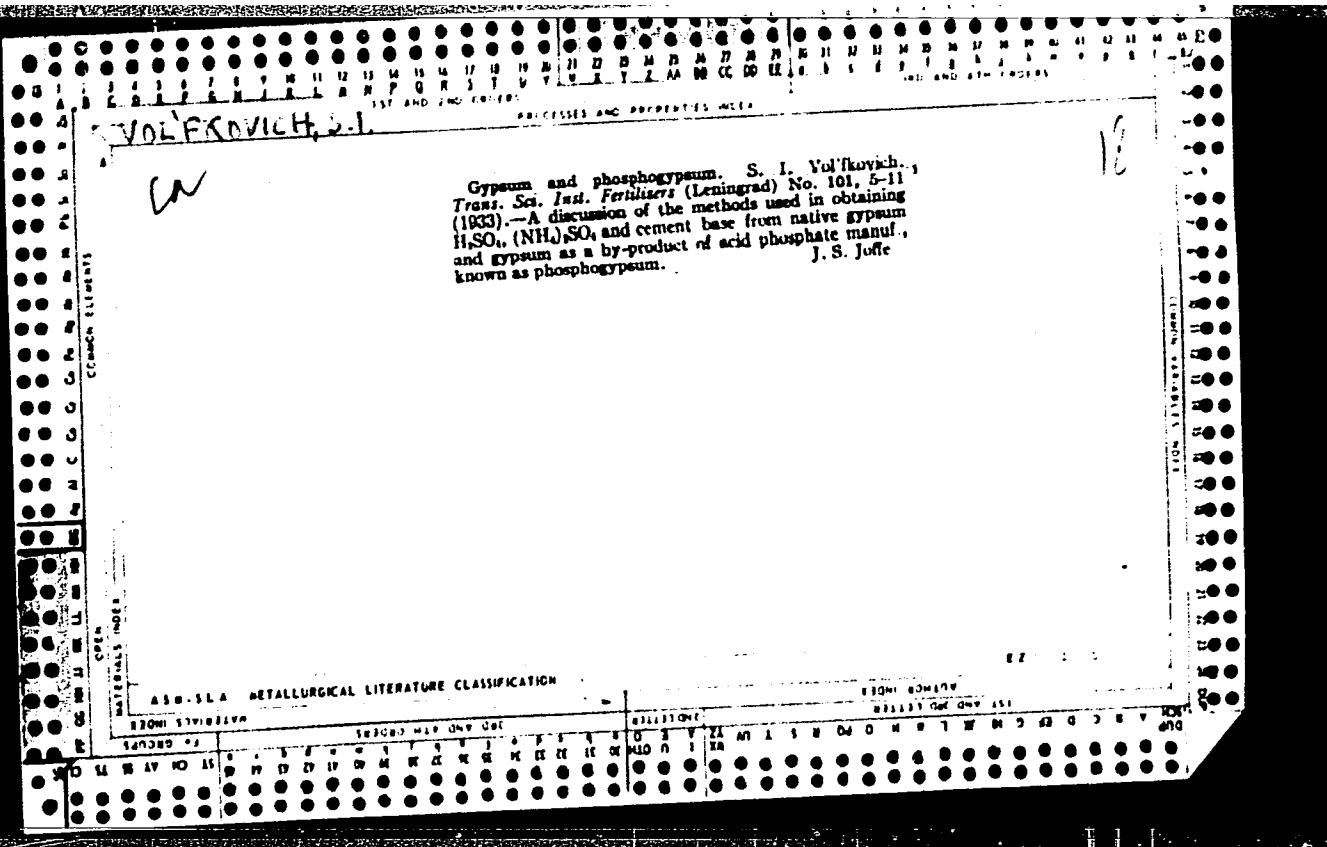
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VOL. FKOYICH, S.L.

PROCESSES AND PROPERTIES

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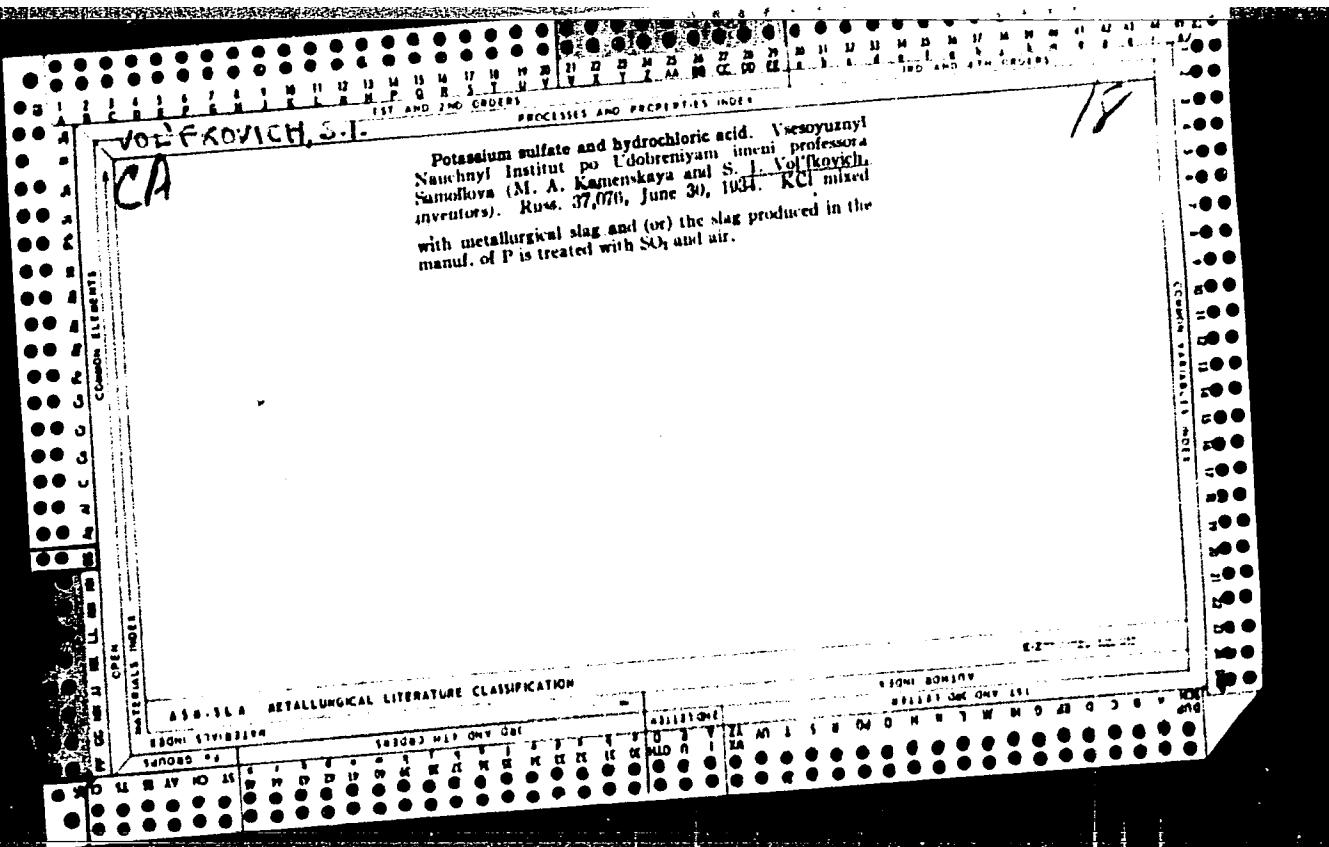
Experiments on the production of sulfur trioxide and cement from phosphogypsum. S. I. Vol'novich and A. I. Legionov. *Trans. Sci. Inst. Fizikal. Nauk* (U. S. S. R.) No. 101, 115-22 (1958).—Phosphogypsum, the residue from acid phosphate manuf., when treated with C at 1150° for 1 hr., gave a yield of 87-90.5% of H_2SO_3 . Addins. of Na_2O and Fe_2O_3 as a catalyst increased the rate of decompos. Phosphogypsum gave a higher yield of H_2SO_3 than native gypsum. The slag obtained could be used in the manuf. of cement, providing the proper addins. of clay are made. J. B. Joffe

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APPENDIX METALLURGICAL LITERATURE CLASSIFICATION

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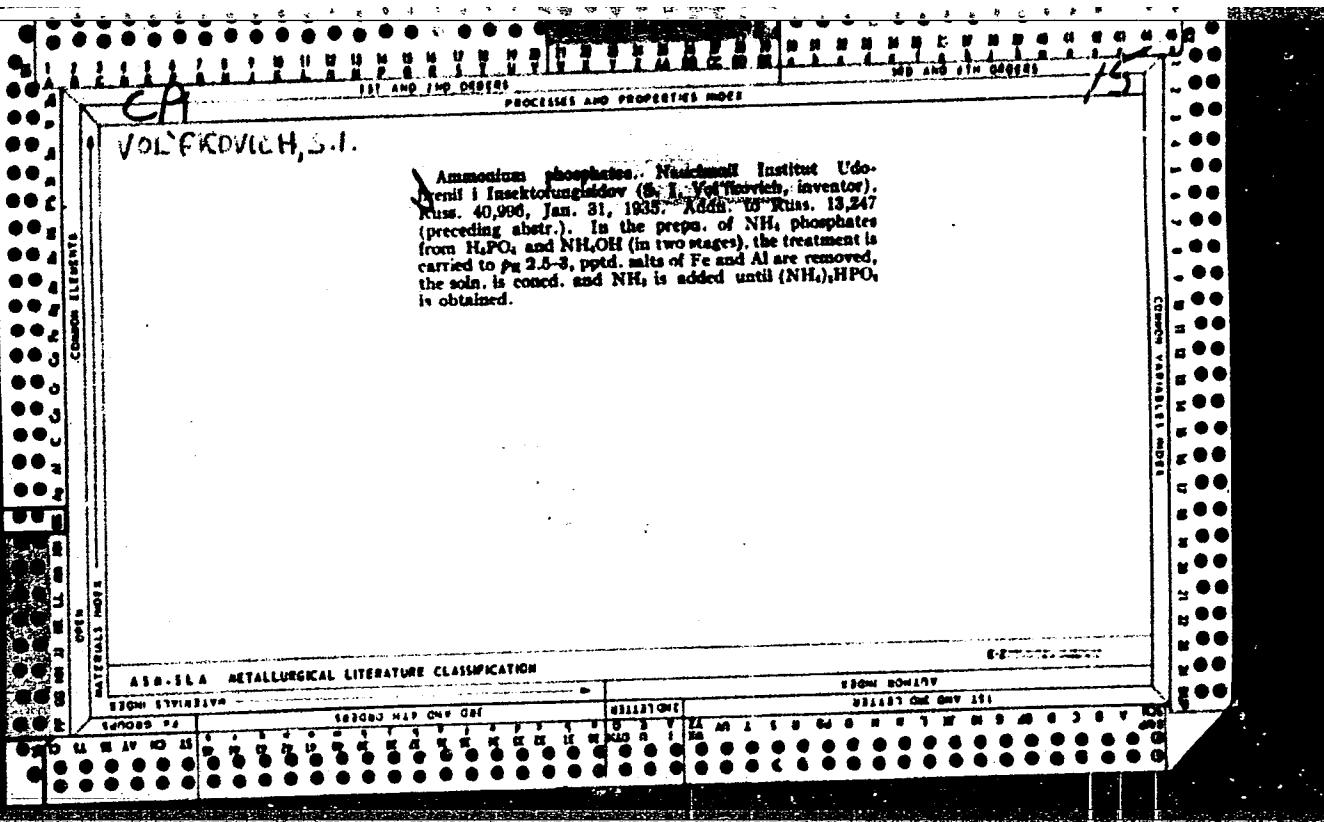
CA VOL'F KOVICH, S.I.

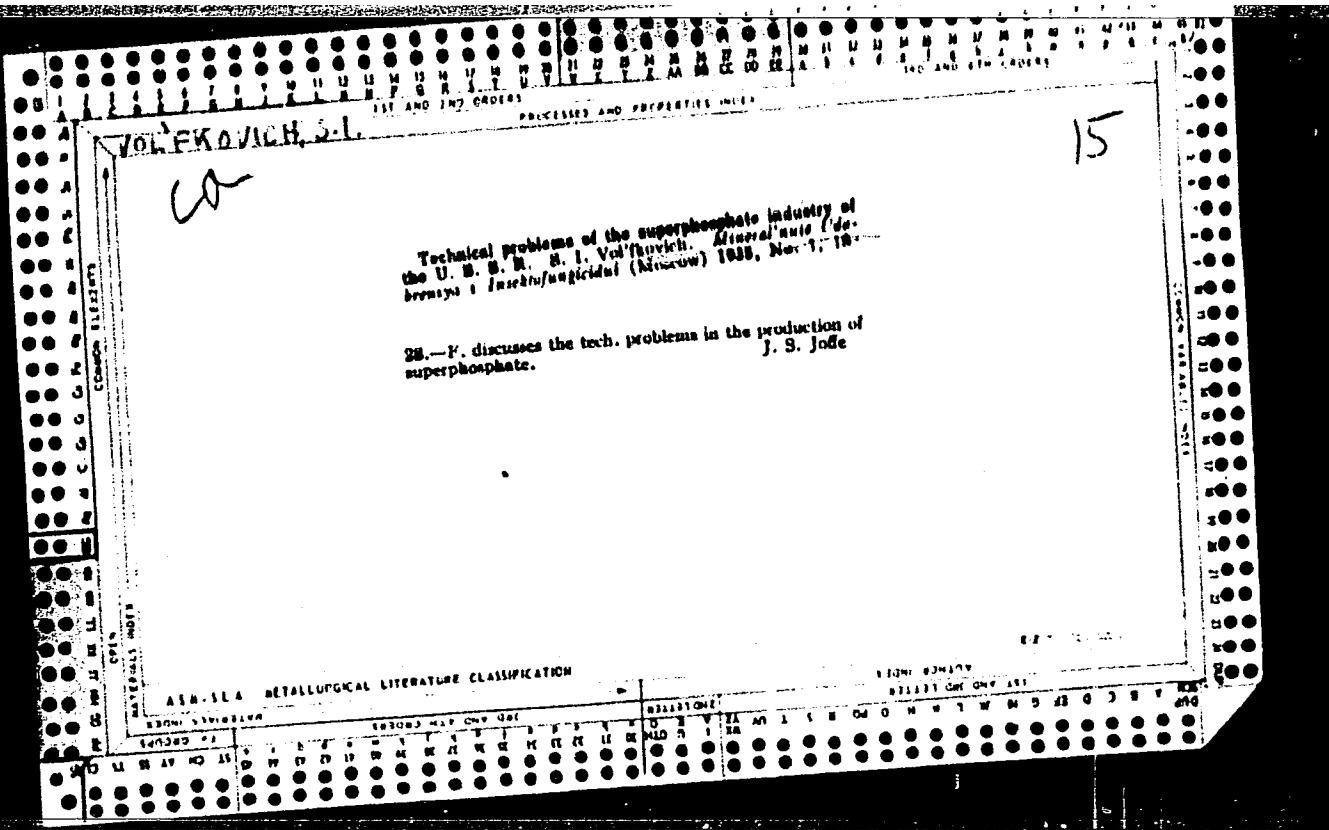
PROCESSES AND PROPERTIES

Fertilizers. S. I. Vol'skovich, S. S. Dragunov and A. N. Rosnayskaya—*Russ.* 30, 781, Nov. 30, 1934. Brown coal, peat, etc., are treated with NH_3 under pressure and the uncombined NH_3 is neutralized, e. g., with H_2PO_4^- .

ASA-SEA METALLURGICAL LITERATURE CLASSIFICATION

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CA

VOL'KOVICH, S. I.

13

Plastic masses from low-grade coal. S. I. Vol'kovich.
Novosti Tekhniki, Seriya Gorno-nauchnaya, Prom. 1935,
No. 3, p. 1. A soft coal from the Moscow district was
treated at 0.8 atm. with NH₃. (NH₄)₂C₂O₄ distd. off on
dry distn. of the product and the plastic masses thus
prepd. were completely sol. in H₂O. The product con-
tains up to 20% of N; it may be used as fertilizer. It
may be partially neutralized with H₂PO₄ to prep. valuable
nitrogen-phosphate organic compds. A. A. B.

AIAA METALLURGICAL LITERATURE CLASSIFICATION

The preparation of ammonium sulfate-ammonium nitrate mixtures by oxidation of ammonium sulfite with oxides of nitrogen or nitric acid. S. Vol'fson, A. Dubovitzkii and N. Kryuchkov. *J. Chem. Ind.* (Moscow) 12, 486-94 (1935).—When $(\text{NH}_4)_2\text{SO}_3$ is treated with NO coning. 2.7% NO_2 , slow oxidation occurs until the soln. becomes acid. The temp. then rises sharply, and oxidation is completed. The rate of oxidation is increased by increasing concns. of NO_2 in the gas and of $(\text{NH}_4)_2\text{SO}_3$ in the soln. Both rate and degree of oxidation increase with increased ratio of O_2 to NO_2 . The product contains both $(\text{NH}_4)_2\text{SO}_4$ and NH_4NO_3 as well as some NH_4HSO_4 , which must be neutralized by NH_3 . The oxidation can also be performed by adding the sulfite soln. to HNO_3 . To get the fertilizer $(\text{NH}_4)_2\text{SO}_4 \cdot 2\text{NH}_4\text{NO}_3$, a ratio of HNO_3 to SO_3 of 2.7-3.0 must be used. The optimum temp. for both methods is 42-5°. There is almost no loss of N_2 , but some NH_3 and SO_2 and much NO are evolved during the reaction. These can be recovered and used again.

H. M. Leicester

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

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JULY 1964

193043-447-001-001

REF ID: A

SERIAL ONE

VOLFSKOVICH, S. I.

BC

Production of concentrated fertilizers from poor phosphorites. E. Baratta and S. Vojnovic (Chem. Eng. Cong. World Power Conf., 1934, LII, 16 pp.)—The manufacture in U.R.S.S. of fertilizers from low-grade phosphorites and apatite—apatite minerals is discussed, the processes employed being those of mechanical erosion, by calcination and flotation, treatment with mineral acids, and electrothermal or blast-furnace reduction to P, followed by oxidation and hydration. The production of mixed fertilizers containing P and N and the enriching of metallurgical slags are also described.

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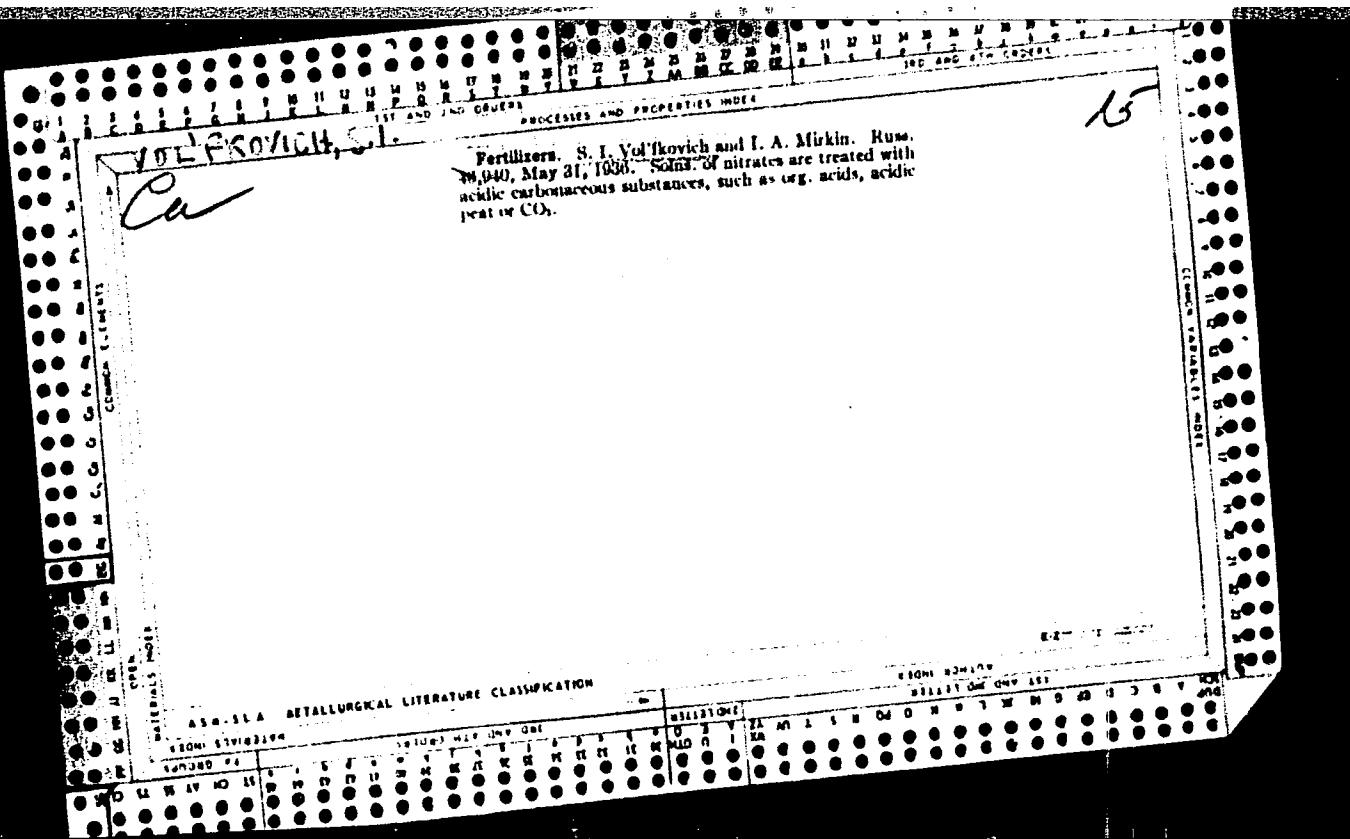
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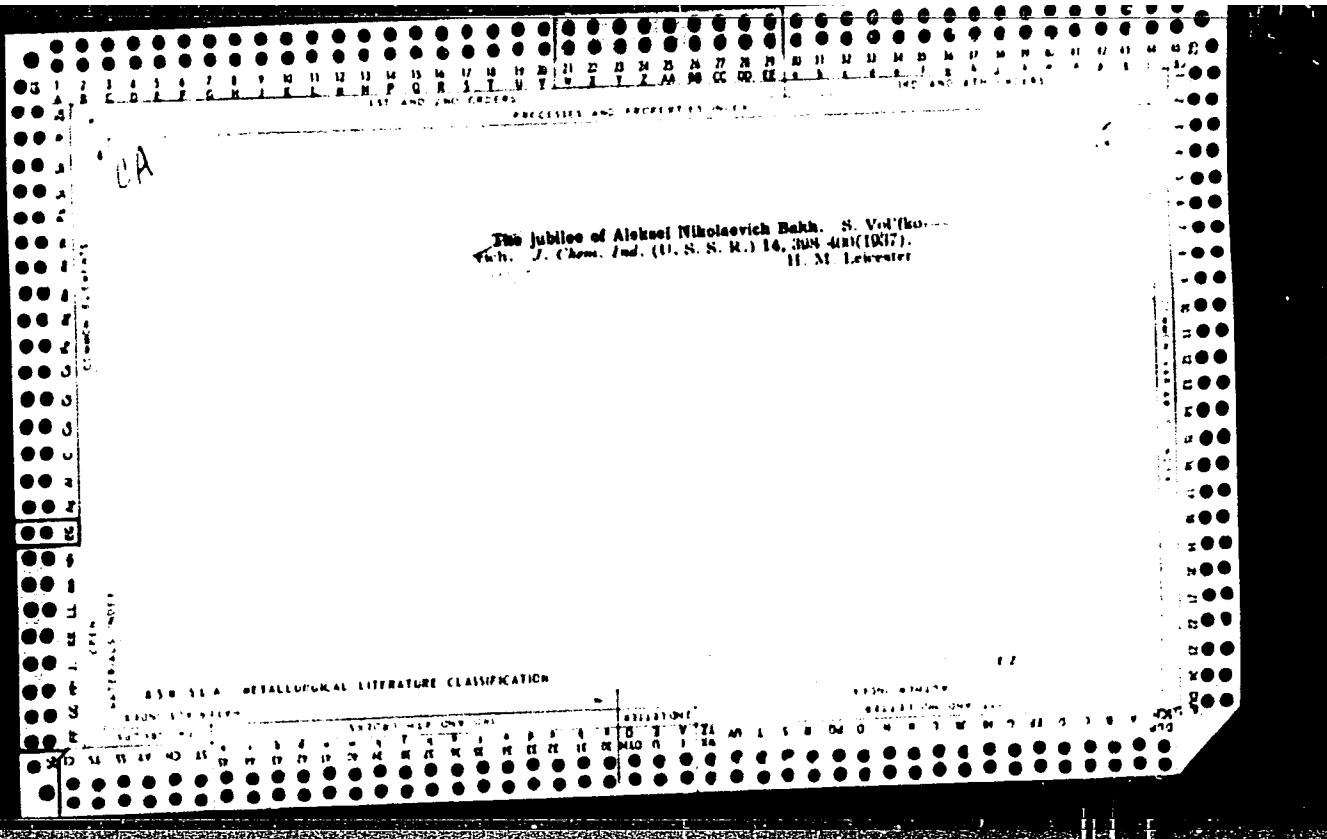


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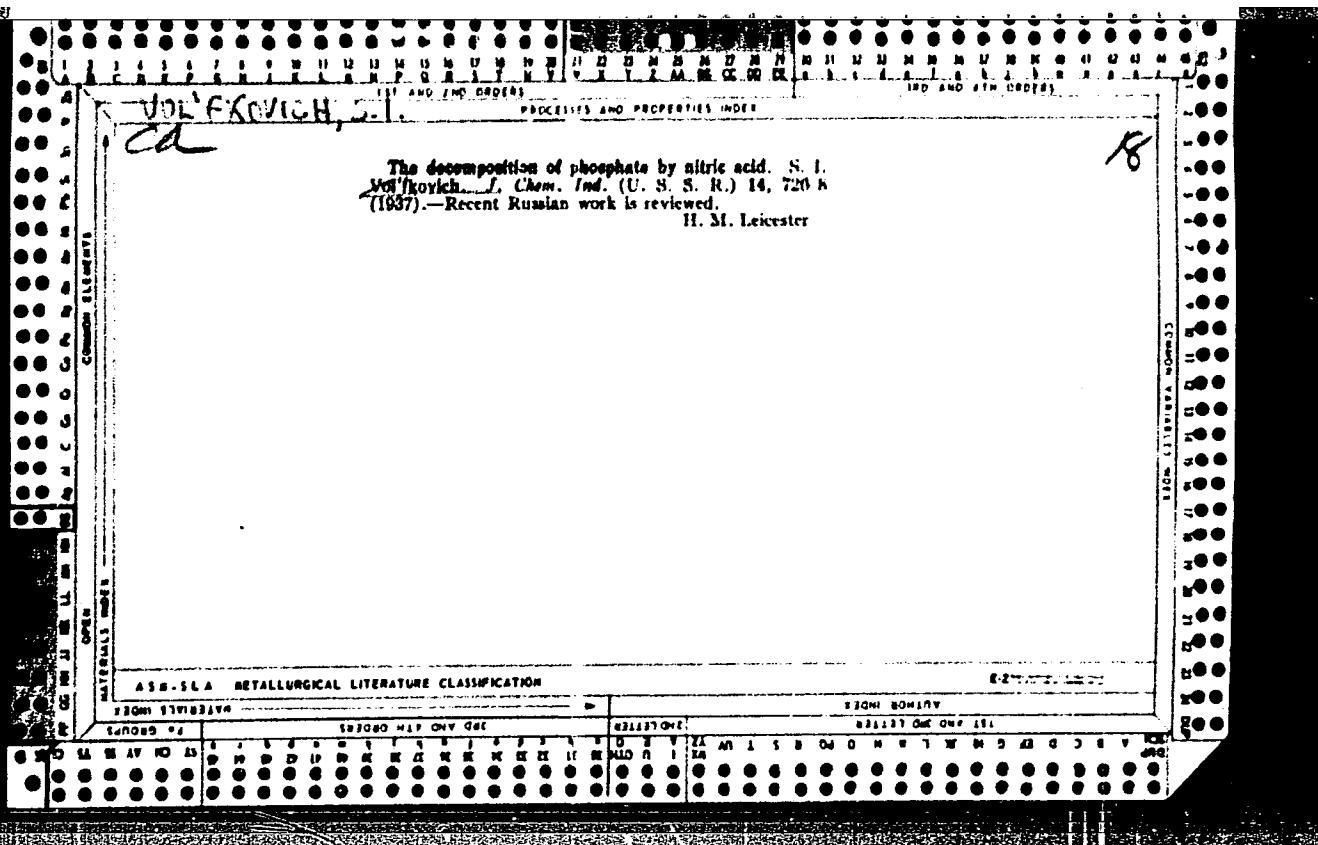
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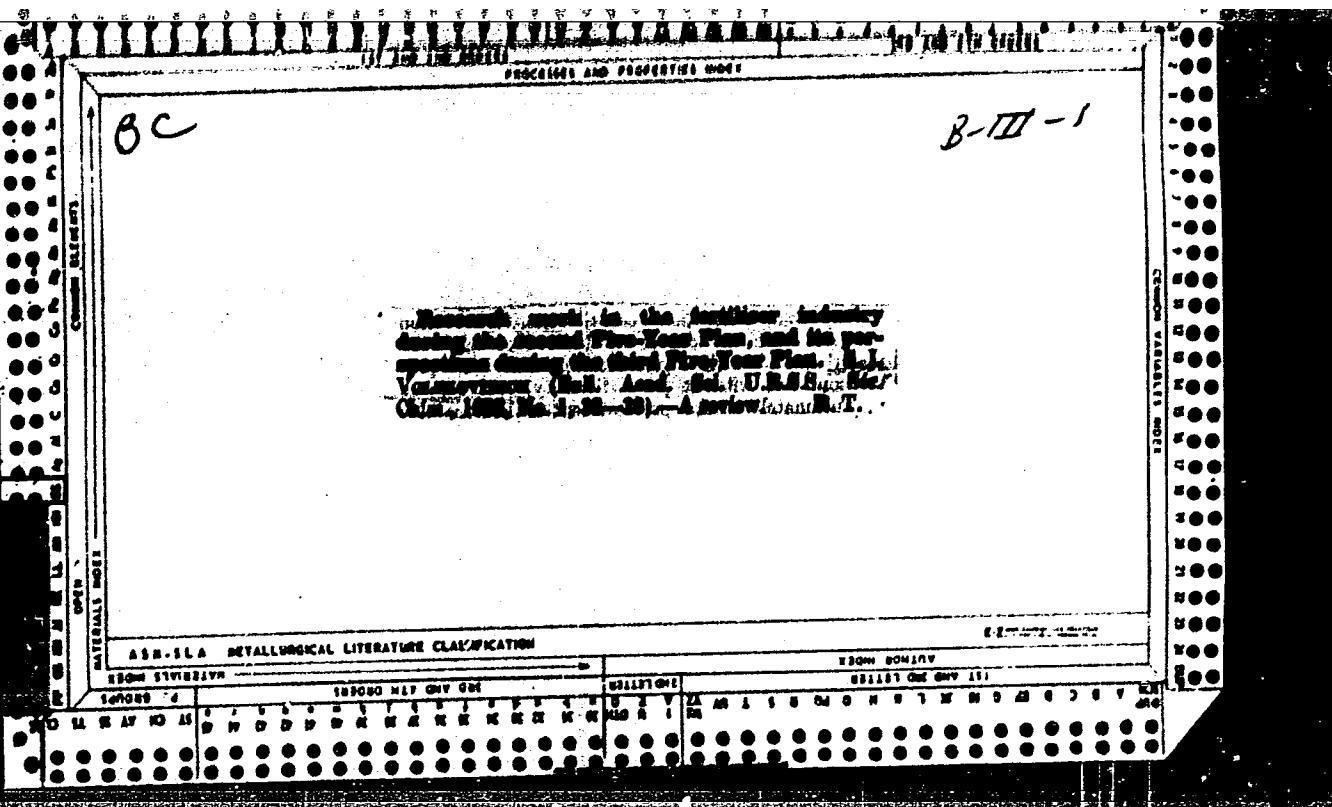
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PROCESSES AND PROPERTIES INDEX																																																																																																							
<p><i>VOL'F'KOVICH, S.</i></p> <p>The decomposition of phosphates with nitric acid. S. I. Vol'f'kovich, A. I. Loginova and A. M. Polyak. <i>Bull. 1938, No. 1, 101-0.</i>—(a) Flotation apatite is decompd. with 65% HNO₃ in the presence of 17% soln. of NaNO₃ to ppt. H₂SiF₆ as Na₂SiF₆. The solid residue is sepd. from the soln., washed, and used as an insecticide (contg. 42% of Na₂SiF₆). The soln. is pptd. by adding finely powdered CaO in 2 steps: (1) pptn. of phosphates of rare earth elements, which then are sepd. from the soln. and (2) pptn. of CaHPO₄, which is filtered out, washed and dried. The soln. of Ca(NO₃)₂ is evapd. down for the prepn. of fertilizer, or treated with (NH₄)₂CO₃, yielding NH₄NO₃. (b) Flotation apatite is treated as in (a) (with 65% HNO₃). The soln. is treated with NH₃ to pH 2-2.5 to ppt. rare earth elements, and after sepn. from ppts. it is treated with (NH₄)₂SO₄, yielding CaSO₄·2H₂O, which is sepd. from the soln. Then the soln. is treated with NH₃ till NH₄H₂PO₄ appears. The hot suspension of the latter is treated with NH₄NO₃. The NH₄H₂PO₄ ppt. is filtered out and, without washing, is mixed with KCl, after which the mixt. is granulated. The NH₄NO₃ soln., contg. 65% of salt, is evapd. down and used for the production of finished product or recycled for salting out of NH₄H₂PO₄. A. A. P.</p>																																																																																																							
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